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ABSTRACT

This publication describes the major components of the Directorate of Community Education (PENMAS) Nonformal Education Project in Indonesia. Chapters 1-3 give an overview of PENMAS, including its history and development, and of the scope and goals of the project. Chapters 4-6 describe various types and levels of staff training conducted under the project--an activity that was a critical component in the building of PENMAS' institutional capacity in informal education. In chapter 7 are presented and analyzed the complex materials development systems and types of learning materials produced by PENMAS. Chapter 8 describes the framework for evaluation and discusses several principles of formative evaluation derived from project experience. Chapter 9 reviews highlights from the summative evaluation project report, including a description of the evaluation design and methodology and policies recommended as a result of data analysis. Chapter 10 elaborates on the relationship developed with the Center for International Education at the University of Massachusetts and the collaborative techniques used in managing the technical assistance component. Chapter XI concludes with a look to future possibilities of PENMAS based on project experience. (YLB)

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INDONESIA:
IMPLEMENTATION OF A LARGE-SCALE NONFORMAL EDUCATION PROJECT

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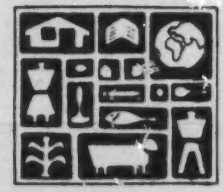
Youth and Sports
Ministry of Education and Culture
Republic of Indonesia

IMPLEMENTATION OF A LARGE-SCALE NONFORMAL EDUCATION PROJECT



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FOREWORD

Indonesia's national development philosophy states clearly that development shall involve all of Indonesia and all parts of Indonesian society. This implies, among other things, that educational activities must serve to free Indonesians from the world of negative and rigid traditional thoughts, to assist them in becoming more creative in identifying development alternatives, and to promote the making of decisions which will safeguard the existence of the nation-state without losing its identity. Indonesia needs an education which will support the growth of human potential in the form of new attitudes, behaviors, and actions and will motivate citizens to develop a strong sense of responsibility to raise the standard of living and the quality of life in Indonesia.

The education system in Indonesia must enable its people to become effective problem solvers, because as a developing country Indonesia faces challenging problems in almost all spheres of life: ideology, politics, economy, social structure, and the defense and security of the nation. All activities in Indonesia, including education, must be compatible with the philosophy of *Pancasila*—the five basic principles of the nation-state.

Like the educational system of any nation, Indonesia's can be viewed as two complementary subsystems: the formal system encompassing schools from kindergarten to university, and the out-of-school or nonformal education system which makes use of short courses, learning groups, apprenticeships, and self-study in the homes and communities of the nation. These two systems must work effectively together to help Indonesians become well-informed, responsible, productive, and effective problem solvers.

With 150 million people, Indonesia is the fifth most populated country in the world. The challenge to education is enormous particularly in light of the notion that material poverty is due to a large extent to educational poverty: lack of functional knowledge, lack of relevant skills, and the need to adapt attitudes and values which will support the process of modernization. Although the Indonesian educational system is large, the numbers of uneducated remain large;

more than twenty million Indonesians aged ten to forty-four never had the opportunity to attend school. The number of illiterates and early drop-outs is very large.

Since 1965, the government and the people in the New Order have worked very hard to implement a series of three five-year plans aimed at raising the standard of living and improving the quality of life of all Indonesians. On August 17, 1978, General Soeharto, the President of the Republic of Indonesia, announced that during the third five-year plan the government would *first*, implement the compulsory education law for children aged seven to twelve, and *second*, implement the new style program to eradicate illiteracy—Program Kejar. The strength of the government's commitment to education is reflected by the annual budget in 1982/83 which was the largest of all sectors in the government.

The word *kejar* means literally to catch-up with what is lacking in all spheres of life. This strategy should be carried out not by having "each one teach one" as proposed by Dr. Laubach in the 1950s, but by having "each one teach ten." Every "educated" Indonesian is encouraged and motivated to get involved in this process of "multiplication" in order to create a geometric progression of growth in the numbers of literates -1 - 10 - 100 - 1000 - 10,000. The word *kejar* also forms an acronym with two meanings: a) be*kerja* dan bela*jar*, which means to work and to learn, and b) *ke*lompok bela*jar*, which means learning group. The whole strategy is based on the formation of learning groups which incorporate John Dewey's principle of learning by doing, and which utilize the leisure time of the workers to learn in order to catch up with what is lacking in all spheres of life.

In order to implement this plan, the Directorate-General for Nonformal Education, Youth, and Sports of the Ministry of Education and Culture began discussions with the World Bank in the early 1970s. A series of studies were carried out jointly which subsequently formed the basis for a project. In this project, the Directorate of Community Education (PENMAS) cooperated with the Center for International Education at the University of Massachusetts using funds borrowed from the World Bank. The major goal of the project was to strengthen the capacity of PENMAS to meet the challenge of educating the large number of people needing further education.

This report on the project to strengthen PENMAS will reveal that PENMAS is now moving from the old, conventional approach

of acting as a school to a new, modern approach of playing the role of learning facilitator. The catching up that needs to be done requires more and more outreach programs in nonformal education. The facilitator's role requires the upgrading of nonformal education personnel in terms of additional capabilities to handle new methodologies and techniques, to effectively utilize resources, and to develop better organization for both learners and tutors.

The development process for an organization as large and complex as PENMAS is not smooth, but great progress has been made. This report is written so that not only the strengths and new vistas are explicitly analyzed, but also the weaknesses are dealt with openly in order that we and others may learn from the experience.

Carrying out a project of this size necessarily involved the contributions of hundreds of people at the senior staff level, thousands of officials at the provincial and district levels, and literally hundreds of thousands of learners. The progress to date has occurred because of the intense commitment and sacrifices of many people at all levels. In what follows acknowledgement is made of the efforts of some of the most influential contributors, but the reader should remember that such lists are always incomplete and invariably miss individuals whose efforts were equally valuable.

The three major institutional partners in the effort were: PENMAS and the Directorate-General of Nonformal Education, Youth, and Sports; The World Bank; and the Center for International Education at the University of Massachusetts. Joining PENMAS and its officials throughout the seven project provinces were staff members from six IKIPs (Teacher Training Colleges). A substantial debt of gratitude is owed to the rectors and staff members of each of the cooperating IKIPs: Jakarta, Bandung, Semarang, Surabaya, Medan and Ujung Pandang.

The World Bank and its officials have participated actively in the design and implementation of the project from the very beginning. Staff members of the Bank joined Indonesian colleagues in carrying out a Pre-Investment Study. This was in turn followed by a detailed Government of Indonesia proposal to the Bank for assistance in developing PENMAS. The proposal was written by staff members of PENMAS with the assistance of a team from the Bank consisting, among others, of M. Ahmed, N. Colletta, P. Coombs, and R. Repetto.

That request formed the basis of the final project design and loan agreement in the form of an appraisal document, again written by a team from the Bank and the Government of Indonesia. The success of the project and its various innovative and creative approaches is the direct product of the work of the individuals who served so admirably on these teams and wrote these documents. Many of the Indonesian officials who worked with these groups subsequently worked on implementing the project.

The Center for International Education was the third partner and had responsibility for the technical assistance and fellowship training incorporated into the overall design. Particular thanks must be expressed to Dr. Mario Fantini, the Dean of the School of Education at the University of Massachusetts, whose continued support and active leadership provided the inspiration to all those involved in the effort.

The technical assistance activities involved nearly a dozen people, each of whom spent from 18 to 30 months living in Indonesia, working with their colleagues at PENMAS and in the IKIPs. Their competence, their spirit of cooperation, and their willingness to undertake a wide variety of tasks as the situation demanded were a major contribution, particularly during the early years of the project when many Indonesian staff members were being trained. Special thanks are due to Harrison Parker, Team Coordinator for the first two years of the project, and to Daniel Moulton, Curriculum Development Specialist and Team Coordinator for the latter part of the project.

Supporting the technical assistance staff and simultaneously carrying out the training at UMass was an equally devoted group of people. During the period of the contract a total of 20 Masters candidates and nearly 80 short-term, non-degree personnel were trained at UMass or in cooperating institutions such as Springfield College. All the members of the Center for International Education and many from the School of Education and the University were involved in one way or another during this project. Special thanks is due to those who had long-term, intensive responsibilities during this project, especially David R. Evans, Principal Investigator, and Linda Abrams, Co-Principal Investigator.

This document describes the major components of the PENMAS Nonformal Education Project. The text is organized in the

following manner: Chapters I, II and III give the reader an overview of PENMAS, including its history and development, and of the scope and goals of the project. Chapters IV, V and VI describe various types and levels of staff training conducted under the project, an activity which was a critical component in the building of PENMAS' institutional capacity in nonformal education. Chapter VII presents and analyzes the complex materials development systems and types of learning materials produced by PENMAS. Chapter VIII describes the PENMAS framework for evaluation and discusses several principles of formative evaluation derived from this project's experience. Chapter IX reviews highlights from the summative evaluation project report, including a description of the evaluation design and methodology and policies recommended as a result of the data analysis. Chapter X elaborates on the relationship developed between PENMAS and the Center for International Education at the University of Massachusetts and the collaborative techniques used in managing the technical assistance component. Chapter XI concludes with a look to future possibilities of PENMAS based on project experience.

A list of guiding principles, which the project attempted to follow through the planning, implementation and evaluation phases, precedes each chapter that deals with a major project activity. These principles serve a dual purpose: 1) as an introduction to the chapter, and 2) as a reference point for other professionals working in nonformal education and related fields to consider in program development, project design, policy formulation and training. This document exists because the major project personnel systematically recorded their experiences during the past four years so that the results of the project could be shared with others. The writing and editing of specific sections of this report were done by those listed below.

Linda Abrams
Nanette Brey
Kathy Cash
John Comings
David R. Evans
Anwas Iskandar
Daniel Moulton
Fredi Munger
W. P. Napitupulu
John Pontius
R. F. Soedharno
Pepep Sudradjat
Sean Tate

The past five years have been a rich and rewarding learning experience for all of us involved in the project. We have worked together in the Indonesian spirit of *Gotong Royung*—a collective

community effort in which all share and benefit together. Our belief in the value of the goals, and in the progress made so far, has led to the desire to share our experience with others. We truly hope that this report will help in some small way to enlighten the path of others as they serve the learners of the world in other settings.

If readers would like more details about some aspects of this report, both the Center for International Education and PENMAS can provide them with additional information, for the principle in nonformal education is: we learn from each other throughout our lives.

W. P. Napitupulu
Director General for NFE, Youth
and Sports
Ministry of Education and Culture
Jakarta, Indonesia
February 23, 1982

INTRODUCTION TO THE PROJECT

Indonesia is a country of 150,000,000 people and a nation of thousands of islands spread out over an area the size of the United States. Hundreds of languages are spoken by Indonesia's many different ethnic groups. Indonesia has been an independent self-governing country for less than forty years and has enjoyed a stable political environment and a prosperous economy for only the last of those four decades. Within this context, Indonesia's development planning has focused on bringing this vast and diverse population to an acknowledgement of belonging to one nation, to a feeling of safety and prosperity, and to a possession of the human and physical resources necessary for urban and rural development. Education has been, and continues to be, a key element of this development process with nonformal education as a recognized and important part of Indonesia's education system.

PENMAS (Direktorat Pendidikan Masyarakat) is the Directorate of Community Education and has been given a mandate to provide nonformal education (NFE) to the people of the towns and villages of Indonesia. This NFE program is designed to support the government's larger goals, which PENMAS has been doing since the birth of the nation. PENMAS began as an integral part of Indonesia's struggle for independence. Community education was viewed, at that time, as a method to rectify the inequities of the colonial education system and to inform and motivate the masses to fulfill the ideals of the new independence. PENMAS was initially created as the Literacy Campaign Bureau, but it was renamed the Department of Mass Education in 1949, and then later was named the Directorate of Community Education. PENMAS is now part of the Directorate-General of Non-Formal Education, Youth and Sports (Pendidikan Luar Sekolah, Pemuda dan Olah Raga) in the Ministry of Education and Culture (Pendidikan dan Kebudayaan).

Goals and Objectives

PENMAS has been given the following goals by the government:

1. Development of basic attitudes and skills for development
2. Education for social leadership
3. Cultivation of good reading habits
4. Education for women
5. Education and mobilization of youth for community welfare[1]

These specific goals are in support of the government's primary objective: to improve the quality of life of the Indonesian people under a system governed by the national philosophy, *Pancasila*. *Pancasila* is a philosophy of five principles:

1. Belief in God Almighty
2. Humanitarianism: all people of the world are related in one large family; there should be humane treatment of all human beings.
3. Nationalism: all the different ethnic groups of Indonesia are now one people; there should be unity and love of the nation-state.
4. Democracy: all citizens should practice mutual self-help and consensus-building discussion.
5. Social Justice: there should be adequate food, shelter, work, and opportunities for all.

The PENMAS program is designed to support all of these goals, but it has its greatest impact on the third principle, nationalism. PENMAS is providing learning experiences to people who have been missed by the formal education system or who were poorly served by that system. The main task of PENMAS has been to teach the national language, Bahasa Indonesia, and it is this language that is contributing most to Indonesia becoming one nation.

When the Indonesian independence movement first began in the early part of this century, Indonesia's revolutionary leaders chose Bahasa Indonesia to be the national language. The Javanese language, which was spoken by almost 50 percent of the population, could have been chosen, but this would have led to a feeling of cultural domination in the minds of the non-Javanese. Bahasa Indonesia was a language spoken as a native language by only a small

1. Education Projects Division. *Indonesia: Appraisal of a Non-Formal Education Project*. Washington, D.C.: World Bank, August 19, 1977. Report No. 1606b-IND.

segment of the population, but it had been used as a trade language among the Indonesian islands. Bahasa Indonesia is easy to learn and is free from strong cultural bias.

There is developing now a truly Indonesian culture based on the Indonesian language. This culture has a large amount of influence from Javanese customs and traditions, since they are the largest group, but there are influences of the Sundanese, Batak, Balinese, Bugis, Dayak, and the customs and traditions of all the other ethnic groups. This culture is still in dynamic change, but the language is the key element. Ensuring that all of Indonesia's people have the chance to learn this language well is extremely important to the development of nationalism in Indonesia.

Social justice (principle five) is also served by PENMAS in their attempt to provide people with skills that can lead to productive work, and the other principles, too, are promoted through PENMAS' learning materials and training programs. In an operatioal view, PENMAS' objectives can be seen, then, as:

1. Teaching and promoting the national language, culture, and basic philosophy of Indonesia (*Pancasila*)
2. Teaching literacy and numeracy
3. Teaching skills, knowledge, and attitudes that lead to a better village life
4. Teaching productive skills that can lead to increased income
5. Supporting a general process of nonformal education that supplements and supports the formal education system.

History

Just after Independence (August 17, 1945), morale in PENMAS was high, and it was one of the more effective government programs at the village level. This revolutionary elan, unfortunately, was severely damaged during Indonesia's political upheaval in the middle of the 1960's. After that time, PENMAS fell to a very low level of morale, personnel, and activity. For ten years or more, PENMAS was operating at a level that was totally inadequate for meeting the needs of the country. In the middle of the 1970's, the government, in a Presidential proclamation, expressed its decision to rebuild PENMAS. With this mandate, new leadership (in the Director General's Office, Dr. W. P. Napitupulu, and in the Director's Office, Mr. Anwas Iskandar) began to reactivate the institution. The institution was not only poorly equipped and inadequately staffed, but it still suffered

from the mental attitude of the previous decade. PENMAS had, therefore, a very weak base on which to rebuild. A full analysis of these institutional problems and their origins is not really necessary here, but an acknowledgement of their existence is important to an understanding of the progress that has taken place. The overall effects of these problems included a tendency for officials to be slow and cautious in the implementation of new ideas and methods. There was also a lack of current models for and experience in successful nonformal education programs, techniques, and materials, and there was a scarcity of trained staff to support programs at national, regional, and local levels. Thus, a team consisting of Indonesian government officials from BP3K (Office of Educational and Cultural Research and Development in the Ministry of Education and Culture) and PENMAS and World Bank consultants assessed PENMAS' organizational capabilities and programs and submitted a project proposal to the World Bank requesting assistance for external financing.

To confront these problems, the Indonesian Government decided to engage in a large-scale intensive project within the regular PENMAS structure as a way to develop the institution from within. One criticism of this project has been that it began too large, but the institution needed this large motivating challenge to bring it out of its inactivity. The thirty-three million dollars of this project (in four years) is not really that much money for a country of 150,000,000 people, and these resources are proving to be insufficient to meet the challenge of providing nonformal education activities to all those who need them in the project area.

In addition, there is another strong reason for the size of the project. Most NFE projects have been small and have depended on the work of a few dedicated people. PENMAS is trying to implement a huge NFE program with a staff of thousands of government employees. These employees cannot be expected to consistently exhibit a high level of dedication similar to that of staff involved in small, innovative, short-term projects. The PENMAS program had to be designed in such a way that it would be successful if people simply do their defined jobs regularly as government employees. This is a problem whose solution cannot depend on the experience of small NFE projects. The project drew from the experience of small NFE projects and from the body of knowledge that exists about the management and design of large education projects. This project is, in a certain sense, an initial trial from which PENMAS can learn and

receive training. The experience gained by PENMAS in this project has helped them to refine their programs, methods, and materials, to make them more effective, and to train their staff to continue to improve and implement an expanded national NFE effort. So the decision to begin such a large program is logical and justified, and needed adjustments in the initial design are understandable in a new endeavor.

PENMAS and the Project

PENMAS has over 6,000 employees working in all of Indonesia's twenty-seven provinces, but the Nonformal Education Project is concentrating all of its efforts in the six most populated provinces of North Sumatra, West Java, Central Java, Yogyakarta (Yogyakarta and Central Java are considered as one region for the purposes of this project), Jakarta, East Java, and South Sulawesi (see map). Seventy percent of Indonesia's population lives in these six provinces. PENMAS has a national directorate based in Jakarta. PENMAS also depends on the services of two national materials development and training institutions (Balai Pengembangan Kegiatan Belajar—BPKB): one at Lembang in West Java for rural programs and the other at Kebun Jeruk in Jakarta for urban programs. The national directorate develops policy and manages the overall PENMAS program. The two BPKBs provide technical assistance to field operations and experiment with new methods and materials.

Each province has a PENMAS office within the Provincial Office of the Ministry of Education and Culture that supports and supervises the field operation. Within each province there are also PENMAS offices at the district or municipality (kabupaten or kotamadya) level. A kabupaten has a population of up to 1,000,000. Kabupatens can draw upon the support of institutions called SKB (Learning Activities Center) for materials and training to aid the field operations. However, as yet only a few of the kabupatens have these SKBs. The BPKBs and the SKBs are under the Director General's Office and support PENMAS, Youth and Sports activities. The Director General hopes to expand this network so that every kabupaten and, in the near future, every kecamatan (sub-district) will be served by an SKB. Each sub-district within a kabupaten has a PENMAS field worker called a penilik. This penilik is the PENMAS worker in the field who covers an area of ten to twenty villages with a population as high as 100,000. This penilik works through a volun-

NONFORMAL EDUCATION PROJECT PROVINCES

teer network to promote, design, and implement NFE programs at the village level. This volunteer network is the key to the success of PENMAS at the village level and is explained in Chapter III. Figure 1 should help to explain this administrative structure.

Project Activities

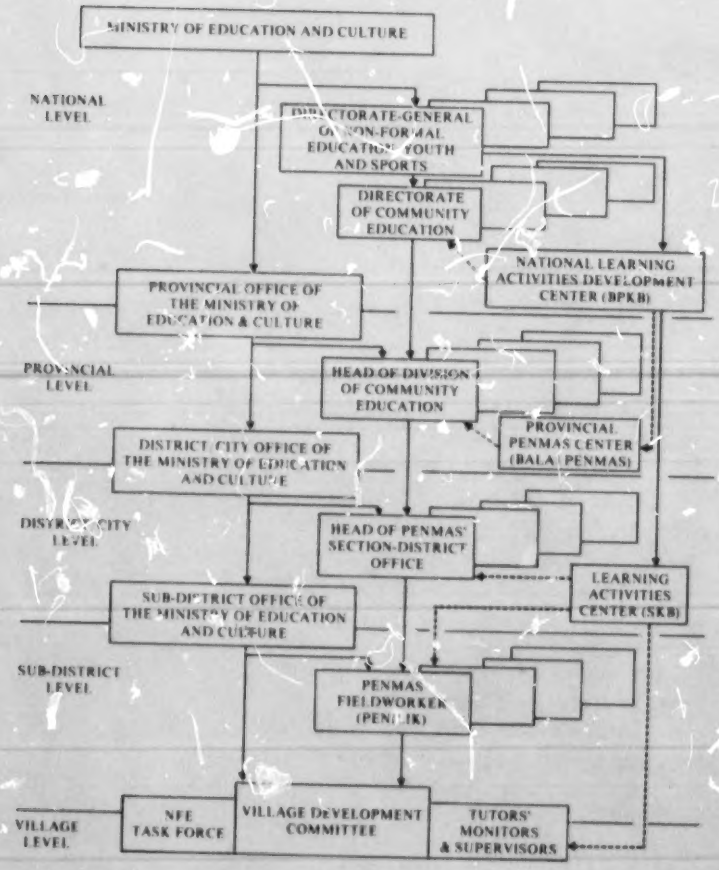
Within the six project provinces and national PENMAS structure, the Nonformal Education Project is implementing the following project activities.

Management

The project is strengthening the management and supervision capabilities of PENMAS through reorganization. A key element of this reorganization is decentralization. The project has financed the building and equipping of provincial PENMAS training and materials development centers called Balai PENMAS. There is still a national NFE curriculum but these Balai PENMAS allow for the adaption of this curriculum to local needs and differences. Furthermore, the project has provided funds for use by PENMAS officials at the kabupaten and kecamatan levels. This further decentralizes the PENMAS response to learning needs.

The learning materials component of the project gives a good example of this decentralization. PENMAS has a set of national level literacy and basic education materials called Paket A. This Paket A was designed by a group of experts, field tested, and then produced on a large scale for use all over Indonesia. Each Balai PENMAS has funds and facilities to produce a wide range of materials to support Paket A, such as slide shows, cassette tapes, pamphlets, games, and other types of learning materials. These materials are designed at the provincial level with input from peniliks and village learners. The kabupaten, SKB and kecamatan level also have funds and equipment for simple materials development that is focused on helping individual learning groups. These materials are produced by local PENMAS offices and village learners.

This mix of a central NFE curriculum and resources for adaptation and response to local needs is a central design element of the Nonformal Education Project. This is a difficult model to implement in an organization used to strong central control. PENMAS has provided targets for activities directed at the provincial, kabupaten, and kecamatan level, which have helped to facilitate the decentralization. At the beginning of the project, a great deal of advice and help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PROVINCIAL LEVEL
HEAD OF DIVISION OF COMMUNITY EDUCATION
PROVINCIAL PENMAS CENTER (BALAI PENMAS)
DISTRICT/CITY OFFICE OF THE MINISTRY OF EDUCATION AND CULTURE
DISTRICT/CITY LEVEL
HEAD OF PENMAS' SECTION-DISTRICT OFFICE
LEARNING ACTIVITIES CENTER (SKB)
SUB-DISTRICT OFFICE OF THE MINISTRY OF EDUCATION AND CULTURE
SUB-DISTRICT LEVEL
PENMAS FIELDWORKER (PENILIK)
VILLAGE LEVEL
NFE TASK FORCE
VILLAGE DEVELOPMENT COMMITTEE
TUTORS' MONITORS & SUPERVISORS

FIGURE 1
OPERATIONAL LEVELS OF NFE PROJECT

was given to these levels by the national staff for the implementation of these activities. Over the first few years of the project that help was decreased with provincial and local officials taking on the responsibility to implement these activities.

Training

The project is establishing a system of regular in-service training for PENMAS staff and supplying special training during the project period. The peniliks are being trained for two weeks every six months for the four years of the project. There are also funds for the training of national, provincial, and kabupaten staff, and some for village volunteers. This training will evolve into a regular training mechanism that will continue to improve all levels of the PENMAS effort.

In addition to this training in Indonesia, PENMAS staff have been trained at the University of Massachusetts, INNOTECH (Regional Center for Educational Innovation and Technology), and other training sites outside Indonesia. One interesting aspect of this training is the funding of twenty lecturers from eight of the teacher training colleges (IKIP) in the project area to study for their M.Ed. at the University of Massachusetts. The project is investing a substantial amount of its resources into developing the capacity of the IKIPs to train students, conduct research, and provide consultation in nonformal education.

The IKIPs provide training to all levels of the education profession in Indonesia and function as centers for educational research and innovation. The IKIPs train teachers at all levels including the people who become PENMAS peniliks. Most of the PENMAS national and provincial staff have attended IKIPs. PENMAS and all other branches of the Ministry of Education and Culture draw consultants from the IKIPs. By aiding the graduate study of these IKIP lecturers, PENMAS has assured itself of a pool of well-qualified consultants. These IKIP lecturers are collaborating with PENMAS on a reform of the IKIP curriculum for nonformal education. They will also be teaching NFE to students and leading research that will be of use to PENMAS. Already, these lecturers have returned to Indonesia and are taking over much of the role that was earlier played by foreign consultants. Quite often, when trainees go abroad for study, they return and move up in their organization. When they move up to administrative positions, their expertise gained in graduate study is lost, and sometimes the prestige of a

foreign degree allows them to move to a higher position outside their field of study. By concentrating the graduate study in IKIP lecturers, PENMAS is assured that they will stay focused on the field of NFE and will be available to help PENMAS in planning and designing their programs. This feature of the PENMAS project has been particularly successful and may provide a model for other development programs.

Materials Development

The project is creating institutions to develop, produce, and distribute improved learning materials. There is a set of national materials called Paket A, and there are materials of all kinds produced at the provincial, kabupaten, and kecamatan levels to support and adapt that national curriculum. To insure the effectiveness of these materials, extensive field testing is undertaken in the design stage.

In the past, PENMAS has relied on simple printed pamphlets. This project is encouraging the development of other types of materials. Slide-tape shows and audio cassettes can be used with learners who cannot read or who cannot speak the national language. Games, photonovels, and printed materials that use extensive graphics and photography will also improve the quality of materials. One SKB in each province has been supplied with a *micropu*, a small minivan with facilities for the design and production of simple, offset printed materials, that will experiment with locally prepared materials.

Learning Funds

The project is providing a source of direct and flexible funding of village level learning activities by establishing local learning funds. Almost one million dollars of the project budget is being used to supply matching funds to some learning groups. This fund will supply $240 (a sizeable amount in rural Indonesia, since the per capita income nationally was only $240 as measured by the World Bank in 1976) to a learning group that will match these funds from its own resources or from community funds. Priority is given to activities that create productive skills, generate income, help other local development projects, and involve the least educated and poorest members of the community. Some of this money is meant to become a revolving credit fund that could continue to support learning activities as funded projects become capable of repaying the loan (without inter-

est) when their activities become profitable. It is expected that some funds will not be repaid.

Evaluation

The project is introducing a continuous evaluation of PENMAS programs by a new evaluation unit within the institution. The project is implementing an evaluation and performance monitoring system that is simple but still provides the elaborate information needed by a large bureaucracy. The system depends on a series of one-page forms that are similar for all levels of the organization. All of this monthly data is used to monitor PENMAS' performance. The research and evaluation unit of the Ministry of Education and Culture, BP3K, has also undertaken a summative evaluation of the four-year project. The results of this formative and summative evaluation are being used to plan for an improved PENMAS effort.

Improved Facilities

The project is providing improved facilities, adequate equipment, and sufficient materials to successfully implement the NFE program. The six provincial centers (Balai PENMAS) are now built and equipped. Vehicles and other equipment have been supplied to the provincial and kabupaten offices, SKBs, and to the peniliks.

Technical Assistance

The project has provided funds for foreign specialists and domestic consultants to help PENMAS staff with the planning and implementation of the project. Most of the foreign specialists have come from the University of Massachusetts, while the domestic consultants have come from the IKIPs and Airlangga University.

The Ten Basic Characteristics of a Learning Process

As was stated before, PENMAS is a large bureaucracy, and at the beginning of the project the PENMAS staff had a poor conception of what NFE was and how to implement it. This made it difficult to turn over authority to design and carry out local NFE activities to the PENMAS field staff. To facilitate decentralization, the Director of PENMAS, Anwas Iskandar, felt that local officials needed a functional definition of an NFE process that was simple, complete, and easily understood. He developed the PENMAS Ten Basic Char-

acteristics of a Learning Process (Sepuluh Patokan) as a guide for PENMAS officials to follow. They are:

1. **Learners**
   PENMAS programs are designed to reach the poorest and most disadvantaged portion of Indonesian society. PENMAS learners are people who have never attended school or who have dropped out before completing even their primary education. Out-of-school youth, the unemployed, and women are PENMAS' primary target population.
2. **Learning Resources**
   These are local human learning resources. They are people who have special knowledge or skills and who are willing to share these with others. Learning resources include local craftsmen or school graduates who volunteer their time and talents to help neighbors acquire basic skills and knowlege.
3. **Learning Facilitators**
   Facilitators, like learning resources, are volunteers. They help organize, manage, and provide the leadership necessary for carrying out learning programs. Learning facilitators are a critical link between PENMAS and the community.
4. **Learning Groups**
   The learning group consists of learners, learning resources, and learning facilitators. Learning groups meet on a regular basis to learn with and from each other. The learning group is PENMAS' primary mechanism for carrying out nonformal education.
5. **Learning Materials**
   These are the media, instructional materials, tools, and equipment needed to help learners acquire the skills and knowledge they want. Along with booklets, pamphlets, posters, tapes, slides, and folders, FENMAS also uses games, tools, and teaching modules as learning materials.
6. **Learning Place**
   A learning place is wherever the learning group gathers to carry out their learning activities. Learning places can be schools, churches, mosques, village centers, or the homes of the learners themselves. What is important about a learn-

ing place is not its structure or facilities, but rather that learners are comfortable there and are willing to gather in the learning place to conduct their activities and program.

7. **Learning Yeast**
   Learning yeast can best be explained as a motivational force that stimulates learning. Learning yeast can take many forms. Some of these forms are tangible such as awards for village achivement. Others are intangible such as personal recognition and support for group activities.
8. **Learning Fund**
   The learning fund is the sum of all material resources needed to carry out and insure the continuity of the learning process. The learning fund consists of money, goods, and services provided by both PENMAS and the local community.
9. **Learning Program**
   The learning program is what the learners do. Generally, the learning program begins with an assessment of learning needs and aspirations. After this, a coherent and systematic plan is developed. This plan provides the framework for the learning activities and process.
10. **Learning Benefits**
    Learning benefits are the results of the learning program. These are both the concrete results of study and practice as well as the feelings of enjoyment and accomplishment learners achieve from participating in and completing learning programs.

The local and provincial PENMAS officials are responsible for developing all ten of these characteristics in every rural village and urban neighborhood in the project area. With this clear definition, these local officials have a better idea of what it is they are trying to do and have a common language with which to talk to each other.

The Collaboration of Three Partners

There are three partners in this project. PENMAS, the World Bank, and the University of Massachusetts. When the Indonesian Government decided to expand PENMAS, they contacted the World Bank and requested their participation. The Bank agreed to advance Indonesia a loan to pay for almost half of the project costs. The Bank

officials met with PENMAS to help them decide what it was PENMAS wanted to accomplish and how they were going to accomplish it. This discussion was also based on the results of the initial study conducted by the World Bank. This dialogue produced a Loan Agreement and an appraisal document that was to govern the use of the Bank funds. The Loan Agreement set out the legal contract of the loan and the appraisal set out a description of the proposed project. The Bank periodically sent out a team to review the progress of the project and its compliance with the Loan Agreement and the appraisal document.

The appraisal was a project design that had been agreed upon by both the Bank and PENMAS. Changes were made in the document several times during the project, but it served as the model on which the project was implemented. PENMAS officials had expressed the need to have an outside agency regularly ask them about their progress and check on the implementation of their original design. Thus, the Bank offered an additional perspective to PENMAS' own internal review process. The Bank reviews were seen as a time to look at the Project as a whole and at each of its individual problems.

PENMAS felt that it did not have the expertise at the beginning of the project to successfully implement all of its parts. To help add the needed expertise, they contracted with the Center for International Education of the School of Education at the University of Massachusetts to supply long-term specialists and short-term consultants to the project. The University also acted as the central training institution for PENMAS staff and IKIP lecturers who were sent to the U.S. for degree and non-degree training.

The model of having short-term and degree training at the same institution that was supplying specialist services proved to be a very successful one since the specialists were working as an integral part of project activities, they were able to provide very accurate advice to the University on how to structure the short-term training. This training, therefore, was geared not to the general theory of nonformal education, training, evaluation, and so forth, but to the way in which these areas were being applied to real project activities. This helped to give the short-term training a valuable focus that allowed it to meet its goal of giving the participants a well-rounded basic knowledge of their subject while providing them with concrete possibilities for application when they returned to Indonesia.

With the specialists in Indonesia and the short-term training in progress at the University, it was easy to develop a solid program for the degree candidates. They were able to study at the University while having constant contact with the field through requests and reports from the specialists and contact with the participants in the on-going, short-term training. The degree training allowed people to focus in depth on their subject matter, and to apply that knowledge by acting as trainers of the short-term participants. These degree people are now back in Indonesia and have taken over the role of the foreign specialists. Their degree gives them the prestige and expertise needed to help PENMAS, and their experience at the University has added to their training skills.

The short-term training was valuable because it removed the Indonesian staff from the demands of their jobs, family, and society, and allowed them to focus on how to solve their common problems. For example, all of the materials development chiefs from the project provinces and the head of materials development for the whole project spent six months studying together in the U.S. and several Asian and European countries. During that time, they were able to concentrate on the technical aspects of materials development without the pressure of deadlines and targets and the distractions of meetings and family affairs. They also got to know each other and formed a working team. The training program was developed with direct assistance from the foreign specialists working in PENMAS, and one of the trainers of this group ultimately went to Indonesia to work as a materials development specialist. The training was assisted by Indonesian degree students who are now in Indonesia acting as consultants to the PENMAS materials development effort. This was a team effort, and the team feeling is still evident after the return of all of the trainees to their jobs. The following chapters will give a more detailed view of the various parts of the project that were presented here in the Introduction.

Vocational skills group in radio repair

THE CHALLENGE FACING PENMAS

The goals and philosphy of PENMAS outlined in Chapter I set the overall dimensions of the task facing PENMAS. The extent and nature of the task differs, however, according to the characteristics and the needs of each of the provinces, kabupatens, and kecamatans served by PENMAS. Each of the nearly 2000 kecamatans which make up the seven provinces* included in the first phase of the project presents a unique challenge to PENMAS. Accordingly, PENMAS has developed a range of programs which can be used in different combinations to meet the specific needs of each setting. These programs are discussed in more detail in Chapter III.

The goals and tasks assigned to PENMAS in Indonesia's Third Five-Year Development Plan, 1979/1984 are described as follows:

> . . . supervision of learning activities primarily those covering illiteracy eradication, dropouts from elementary school and graduates of elementary school who do not continue in the formal system, dropouts from junior high school and junior high school graduates who do not continue in the formal system, and senior high school dropouts as well as graduates who do not continue in institutions of higher education.

The total number of these clients to be served in all of Indonesia during the five years of the Third Five-Year Development Plan is 8,000,000 persons. The specific challenge facing PENMAS in the Nonformal Education Project is to develop its institutional capacity in the seven most populous provinces to meet the needs of these clients.

To give the reader a better sense of the task facing PENMAS in each of the seven provinces at the beginning of the NFE Project, this

* For the purpose of statistical analysis, this chapter will consider Yogyakarta and Central Java as separate entities thus bringing the number of project provinces to seven.

chapter[1] provides descriptive statistical data about the provinces and their populations. The data cover some aspects of the need for further education as well as some of the problems posed in reaching those persons whose educational needs are greatest. This chapter also discusses the challenges facing peniliks in their sub-districts.

The data in this chapter illustrate the need for a decentralized and differentiated set of strategies depending on local circumstances. The present project focused on setting in place the institutional capacity of PENMAS to meet the challenges of illiteracy, school dropouts and unemployment. This institutional capacity will enable PENMAS to respond to the unique problems of each kecamatan. The data presented in this chapter illustrate the extent to which PENMAS will have to build upon its new infrastructure to develop the flexibility to meet the challenges of individual kecamatans.

The discussion primarily focuses on the literacy and basic education tasks of PENMAS, partly because data concerning this problem are somewhat more readily available than are indicators relating to health, unemployment or development of local enterprises. These other areas are an important part of PENMAS efforts, but literacy, particularly through learning groups making use of Paket A, was given priority during the initial phases of the project.

CHARACTERISTICS OF THE PROVINCES

The seven provinces included in the project contain nearly 70% of the total population of Indonesia, and all but two of the provinces are on the Island of Java. However, they do present some fairly great differences in physical characteristics, population distribution and language and culture. All the largest cities as well as the most densely populated rural areas are included in these seven provinces. Yet, the two provinces outside of Java contain a number of kecamatans with quite low population densities. PENMAS must deal effectively with these differences if programming is to succeed.

A number of these differences can be seen in Table 1 which indicates that as of 1976 the total population in the project provinces was over 92 million. The target group for PENMAS activities is comprised of the unschooled population ranging in age from 10 to 45,

1. Much of this chapter is drawn from a field report written by Harrison Parker entitled, "Report on Indicators of Need for PENMAS Literacy Programs."

with a priority emphasis on those out-of-school youths and young adults, aged 10 to 24, who have little or no formal schooling. The target group contains a disproportionately large number of persons from lower socio-economic groups in rural areas. PENMAS is also charged with serving women, 50% of whom have no formal education (compared to 30% for men). According to Table 2, in 1976 in the seven project provinces, over 28 million persons were illiterate, of whom the majority are women.[2]

The total number of kecamatans in the seven provinces is shown in Table 1 to be 1,895. These same kecamatans also contain a total of 29,634 villages. Most of these are rural sub-districts, but they also include a number which are highly populated, urban sub-districts, particularly in the special province of Jakarta. These differences are reflected more clearly in the average number of people per kecamatan shown in Table 1.

PENMAS programs are implemented by kecamatan level field-workers, the peniliks. There is currently one penilik per kecamatan. It is evident that the challenge facing the penilik varies substantially with the population characteristics as well as the geographical size of the kecamatan. Table 1 demonstrates the considerable variation in the average area of kecamatans in different provinces. Discounting the predictably small area of kecamatans in Jakarta, the range in average size varies from 44 square kilometers in Yogyakarta (which also contains a large city) to about 400 square kilometers in both North Sumatra and South Sulawesi. Clearly the task facing a penilik with 400 square kilometers to cover is significantly different from a penilik on Java whose sub-district on the average is approximately 100 square kilometers. The quality and extensiveness of the transportation network also influences the tasks facing individual peniliks.

The fourth column in Table 1 shows that the average population of the kecamatans on Java is about 50,000 inhabitants, with the exception of Jakarta where there are more than 160,000 people per kecamatan. Although not all of these people require services of the penilik, clearly if even a small percentage do, the penilik could be overwhelmed. Outside of Jakarta, population densities on Java are of the order of 500 to 800 people per square kilometer. Under these

2. According to the data available for 1970, 51% of the women were illiterate compared to 29% of the men. (*Indonesian Social Development Atlas 1930–1978*). The ratio would be approximately the same for 1975–76.

TABLE I

CHARACTERISTICS OF PROJECT PROVINCES

Province	Total population (1975/76)[1]	Number of kecamatans	Average area (km^2) per kecamatan	Average population per kecamatan	Average population density per km^2	Average per capita income by kecamatan (in Rupiah)[2]
North Sumatra	7,150,233	182	395 Km^2	39,287	99	Average 31,452 (1976) Range (23,000–39,000)
DKI Jakarta	4,868,024	30	20	162,267	8,113	——— NA ———
West Java	22,769,302	404	108	56,360	522	Average 35,556 (1975) Range (18,000–60,000)
Central Java	23,191,773	492	70	47,138	673	Average 31,319 (1975) Range (19,000–60,000)
Yogyakarta	2,608,418	73	44	35,732	812	Average 20,479 (1975) Range (14,000–26,000)
East Java	26,574,000	547	88	48,581	552	Average 20,000 (1978) Range (16,000–32,000)
South Sulawesi	5,604,895	167	402	33,562	83	Average 35,000 (1975) Range (22,000–65,000)
Total	92,766,645	1,895				

1. Source: *Indonesian Social Development Atlas 1930–1978*, (Peta Pembangunan Sosial Indonesia 1930–1978), p. 5.
2. Source: Studies on Poverty Areas by the Ministry of Agriculture.

circumstances a penilik does not have to do much traveling to organize, supervise and support PENMAS programs. However, in Sulawesi and Sumatra population density is about 100 or less per square kilometer. Under these circumstances, considerable travel is necessary in order for the penilik to manage the same number of programs as a penilik in Java. Therefore, lower population density and greater geographical size of the kecamatan results in a much more challenging set of logistical problems for peniliks outside of Java. To help solve these problems the NFE Project provides motorcycles for all peniliks to enable them to reach their clientele. Four-wheel vehicles are also provided to their district and provincial level supervisors.

The last column of Table 1 gives a rough indication of the wealth of the kecamatans in each province. Using the exchange rate of Rp. 415 to the U.S. Dollar which was in effect in the middle 1970's, the average per capita income in the project provinces ranges from about $48 in East Java to nearly $85 in West Java. The figures in parentheses indicate the extremes of the range for individual kecamatans within each province. The range is substantial and would certainly reflect major differences in the characteristics and the learning needs of the kecamatans. Again, PENMAS strategy will need to take into account these differences and the likely influence on the levels of resources needed to carry out educational activities.

PENMAS CLIENTELE AND PROGRAMS

Table 2 presents data on the average number of illiterates both by province and by kecamatan. Since PENMAS structure calls for a single penilik for each kecamatan, and since the penilik is the only full-time officer of PENMAS at that level, the numbers serve to define the scope of the task for each penilik. However, the numbers do represent averages. A better sense of the range of clientele for literacy programs is provided by the case of East Java where the average kecamatan in Surabaya, the capital city, has nearly 35,000 illiterates, while several rural kecamatans report only several hundred illiterates. In general, the larger urban areas, in addition to having larger population densities, also tend to have higher illiteracy rates. Whatever the cause, the penilik in an urban setting certainly faces a task whose magnitude is very different from a penilik in a rural area. An urban penilik may have from 5 to 10 times as many illiterates in his kecamatan as his rural counterpart.

TABLE 2

ILLITERATES PER PROJECT PROVINCE 1975/76

Province	Total no. illiterates	Percentage of population	Average number illiterates per kecamatan
North Sumatra*	1,279,892	17.9	7,032
DKI Jakarta	803,244	16.5	26,775
West Java	6,147,712	27	15,217
Central Java	8,256,271	35.6	16,781
Yogyakarta	905,121	34.7	20,570
East Java	9,540,066	35.9	17,440
South Sulawesi**	1,647,839	29.4	9,867
Total	28,580,145		

* Calculated from the percentage of illiterates for all eight provinces of Sumatra.
** Calculated from the percentage of illiterates for all four provinces of Sulawesi.

Source: *Indonesian Social Development Atlas 1930–1978*, p. 151.

Because of the differences in the challenge in each kecamatan, PENMAS will have to use its newly increased institutional capacity to allocate resources to more closely fit the needs of the population. Kecamatans with large populations and large proportions of illiterates will need to have more resource and training centers at the kabupaten and even the kecamatan level. In addition, recommendations have been made to provide peniliks with assistants and other support staff in kecamatans with the greatest needs.

In addition to literacy programs, PENMAS also attempts to serve dropouts from the formal school systems and the unemployed in the Paket A program as well as in Family Life Education and Vocational Education learning groups. The newly developed Learning Fund Program also serves illiterates, dropouts and especially the unemployed or underemployed. Table 3 indicates that the total number of dropouts from elementary, junior and senior high school and graduates from elementary and junior high school who did not continue schooling was approximately 1,336,177 in the seven provinces in 1975/76. The actual numbers of dropouts and discontinuing graduates in each province in Table 3 may not be fully accurate

TABLE 3

DROPOUTS PER PROVINCE 1975/76

Province	Elementary School		Junior High School		Senior High School	
	Dropouts	Graduates who do not continue	Dropouts	Graduates who do not continue	Dropouts	Graduates who do not continue
North Sumatra	51,650	35,988	7,862	4,590	2,976	n/a
DKI Jakarta	35,048	24,420	5,335	3,115	2,020	n/a
West Java	164,173	114,391	24,989	14,590	9,460	n/a
Central Java	167,863	116,961	25,551	14,917	9,673	n/a
Yogyakarta	18,446	12,853	2,808	1,639	1,063	n/a
East Java	191,843	133,670	29,201	17,048	11,055	n/a
South Sulawesi	40,582	28,276	6,177	3,606	2,338	n/a
Total	669,605	466,559	101,923	59,505	38,585	n/a

Source: *Rangkuman Statistik Persekolahan 1976.* (BP3K, Ministry of Education and Culture), pp. 36–38.

because they are derived from national percentages which are applied proportionally to the seven project provinces based only upon population percentages. The number of dropouts is likely to vary according to provinces and according to kecamatans within a province. However, this very rough estimate further illustrates another dimension of the challenge facing PENMAS.

The Paket A program provides an important service to dropouts by enabling them to acquire school equivalency certificates upon passing school-leaving examinations. The number of persons needing these certificates is constantly increasing because both government agencies and private organizations are requiring school certificates for obtaining jobs or promotions. For example, in Central Java a thirty-three-year-old elementary school dropout was a candidate to be appointed as Village Head. However, one requirement for that position is possession of an elementary school certificate. This elementary school dropout studied in the Paket A program and succeeded both in obtaining his school certificate and in being appointed

TABLE 4

NUMBERS OF UNEMPLOYED PERSONS IN THE SEVEN PROJECT PROVINCES 1975/76

Province	Rural	Urban	Total
North Sumatra*	84,023	28,949	112,972
DKI Jakarta	—	104,768	104,768
West Java	196,102	49,333	245,435
Central Java	101,686	50,457	152,143
Yogyakarta	8,349	7,320	15,669
East Java	62,308	65,247	127,555
South Sulawesi**	103,943	13,103	117,046
Total	556,411	319,177	875,588

* Calculated from percentage of illiterates for all eight provinces of Sumatra.
** Calculated from percentage of illiterates for all four provinces of Sulawesi.

Source: *Indonesian Social Development Atlas 1930–1978*, p. 63.
Summary of Indonesian Population by Province and Island 1976, pp. 37–39.
(Ringkasan Penduduk Indonesia Menurut Propinsi dan Pulau 1976.)

as Village Head. As this need to obtain school certificates increases, so does the challenge to PENMAS to provide opportunities for dropouts to obtain them.

Table 4 presents data for the number of unemployed in the seven provinces. These data are not distributed by kecamatan; however, they are differentiated by rural and urban areas within provinces. These data are very misleading because unemployed are defined as those who are actively looking for work and who ". . . have had (less than) one hour of income work in the week prior to registration (of the data)." According to these statistics the number of persons officially defined as "unemployed" is very low. If the number of "nearly unemployed" or underemployed were added to the number of unemployed—and, indeed, all of these persons comprise PENMAS clientele—the number would be very much greater. A more realistic picture of the unemployment problem is provided by the following information: in 1980 the number of unemployed, out-of-school youth between the ages of 15–30 nationwide was 14,633,000 persons.

The challenge to PENMAS is to accommodate these persons in Vocational Education and Family Life Education learning groups, and in privately run vocational courses which are supervised by PENMAS. PENMAS has been successful in training large numbers of people in various vocations. However, the problem remains as to how these people may be employed after acquiring these vocational skills. PENMAS has risen to this challenge by developing the Learning Fund Program which provides groups of skilled and semi-skilled persons with capital to begin small businesses. PENMAS also provides the groups with resource persons to facilitate the learning of small business management, administration, and production skills. This program has undergone extensive research and development in the NFE Project and is ready to be expanded on a much wider basis to meet the needs of the growing numbers of unemployed and underemployed in Indonesia.

PROJECT PROGRESS AND FUTURE NEEDS

Basic education groups have long been a major activity of PENMAS. With the beginning of the World Bank assisted project, new impetus was given to basic education through provision of new materials in the form of Paket A pamphlets, training for the peniliks, and support for much more active formation of new groups. Data published by the PENMAS national office show that the number of

learners in basic education groups rose from about 260,000 in 1978/79 to over 850,000 in the 1981/82 period. In 1978 the number of literacy and numeracy learners represented just under 50% of the total number of learners being served by PENMAS in all of its programs. By 1981/82 the literacy learners had risen to just under 64% of the total number of learners, who by then numbered over 1,300,000. The first four years of the project have thus seen a more than three-fold rise in the numbers of illiterates being served by PENMAS programs. However, PENMAS has also substantially increased the numbers in its other programs as well. Particular emphasis is now being placed on the learning fund groups which combine learning and production of some kind. The number of these groups is now growing rapidly.

TABLE 5

PENMAS SERVICES TO ILLITERATES

Province	Avg. # illit. learners/ penilik ('78)	% of illit. being served by PENMAS ('78)	Avg. # illit. learners/ penilik ('81)	% of illit. being served by PENMAS ('81)
North Sumatra	74	.8%	271	12.2%
DKI Jakarta	117	n.a	472	3.3%
West Java	139	1.1%	593	10.5%
Central Java	270	3.5%	517	11.4%
Yogyakarta	71	0.7%		
East Java	35 (600)	0.4% (8.2%)	378	7.5%
South Sulawesi	249	4.7%	317	8.9%

Source: Report: Carrying Out NFE Project Activities. (Laporan: Pelaksanaan Kegiatan Proyek Pendidikan Non-Formal) PENMAS, 1981

Table 5 provides data from two time periods which measure the extent of the PENMAS effort in relation to the need for its services. The first two columns represent data from 1978 showing the average number of learners per penilik within each province and the percentage of the total number of illiterates being served on the average within the province. The reader should keep in mind that these figures are averages, and that within the provinces there is considerable variation between kecamatans, which can result in large variations in

the numbers of illiterate learners supported by different peniliks. Similarly, the percentage of illiterates being reached in any given kecamatan can vary widely.

The province of East Java illustrates this variation in an extreme form. In 1978, special intensive literacy programs were launched in three kabupatens within East Java. In those districts, more than 90% of the illiterates were involved in programs, with nearly 5,000 illiterates involved in the average kecamatan. These programs, of course, have a great deal of special support and were not carried out as part of the regular PENMAS program, but they serve to illustrate what can be achieved. However, if these figures were included in the averages for all of East Java, the averages are badly skewed. Including them, for instance, leads to a provincewide average of 8.2% of the illiterates being served, while in actual fact the percentage being served, excluding those three kabupaten is 0.4%. Similarly the average number of learners per penilik is 35 without those three districts. If they are included, the average jumps to nearly 600 per penilik.

As can be seen from Table 5, the average number of learners per penilik in 1978 ranges from a low of 35 in East Java to a high of 270 in Central Java. If one assumes approximately 15 learners in an average group, then to achieve 500 learners (the annual recruitment quota of new learners assigned to peniliks in the project), a penilik would need to organize and support about 35 groups. The penilik doesn't actually teach the groups, but rather helps to organize them, finds a tutor and provides general support. This is quite a heavy load for a typical penilik who would have all these groups operating simultaneously.

Column three in Table 5 indicates the numbers of learners in the average kecamatan in 1981. There has been a substantial increase in the four years, with three provinces near or above the 500 figure. North Sumatra and South Sulawesi are the lowest, with about 300 learners per penilik. The reader is referred again to the data in the previous tables which shows that these two provinces have much larger average size per kecamatan and population densities which are 20% or less than those of the kecamatans on Java. These factors make communications and support much more difficult, and may place an effective upper limit on the number of groups and learners which peniliks can be realistically expected to serve.

The second and fourth columns of Table 5 show the percentage of the illiterate population being served by PENMAS in the years

1978 and 1981. In 1978 the percentages are very small, mostly around 1%. At that rate the absolute number of illiterates would grow as the population continued to grow. Four years later, the figures are more promising with most of the provinces approaching or somewhat surpassing 10%. Several factors contribute to these much improved levels of service. First, an increase in schooling has reduced the number of illiterates in the population in general, and secondly, the substantial increase in PENMAS activity has greatly enlarged the numbers being served. At current rates, nearly a decade would be required to serve all the illiterates.

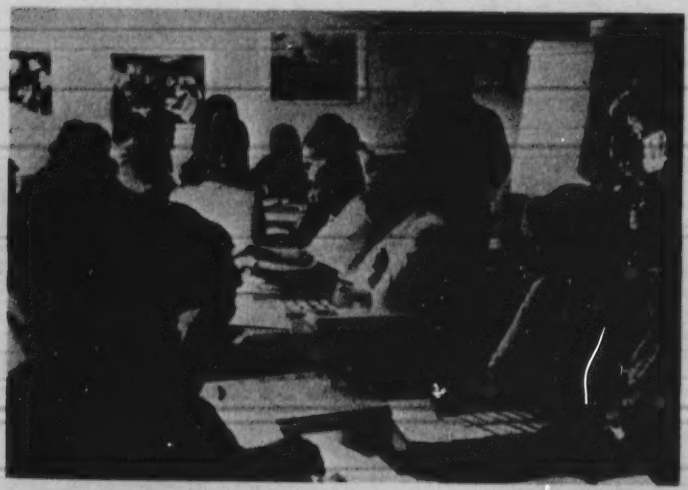
The figures for Jakarta are noticeably low and reflect the special circumstances of a densely populated urban area which has nearly 18,000 illiterates per kecamatan, which is three or four times the number typical of most kecamatans. The differences in data are due in part to different literacy tests used in Jakarta. Clearly, to meet the special needs of Jakarta and other densely populated areas, special programming and supplemented staff resources will be required. PENMAS has been placing more emphasis on the areas outside of Jakarta up to now, in part with the recognition that many services are available in Jakarta which may not be available outside of the urban areas. The two special provinces, Jakarta and Yogyakarta, together contain about 800,000 illiterates, or about 9% of the total number of illiterates in the seven provinces. Whether PENMAS should make a more concerted effort to reach these urban groups, or whether priority should continue to be placed on the majority who live outside the urban areas is an issue of policy for PENMAS to consider.

The data reflect the very significant progress which PENMAS has made during the first four years of the project. Although not reported in this chapter, considerable increases have occurred in the other learning activities of PENMAS as well. The statistics on the numbers of learners reached are probably somewhat on the optimistic side, the natural result of pressures to enroll large numbers of new learners and inevitable demands to meet quotas. The mid-term evaluation of the project notes a number of discrepancies in the pattern of reporting on enrollment levels and suggests the need to upgrade the quality of the information. At the same time, the report suggests a shift in emphasis away from recruitment and toward more effort at maintaining attendance and improving the quality of the learning which results.

The penilik has a very complex role and often does not have the skills or the resources necessary to adequately fulfill that role. The evaluation report suggests that more emphasis be placed on helping the penilik to develop an effective means of assessing the needs of villages. The needs will likely be a mixture of training in literacy and numeracy, vocational skills, income-generating activities, and family life issues. How to first determine these needs, and then equally important and difficult, how to find a way of meeting some of these needs is a considerable challenge to the penilik. The root of the problem lies in the reliance on volunteer instructors, tutors and facilitators. Identifying such resources, motivating them, connecting them with groups whose needs match their abilities to help, and keeping them functioning at an effective level constitute often insurmountable problems for the penilik.

The data also reflect a need for more attention to the match between needs for services and the distribution of resources. PENMAS is certainly aware of this issue and in the second phase of the project will be devoting more attention to it. The divergence in area, population density and numbers of illiterates in kecamatans reflect considerable variation in needs. Current PENMAS structure is based on equal allocation of resources to all administrative units, regardless of characteristics. Now that the basic infrastructure is in place, PENMAS can turn its attention to devising resource distribution policies which also reflect the size and complexity of the challenge in different kinds of sub-districts. Additional staff and resources will be needed in some of the kecamatans more than in others. More detailed quantitative measures of need will assist in making these decisions.

Mid-program evaluation of Balai PENMAS staff training program



Participatory learning activities in Balai PENMAS staff training program

FIELD IMPLEMENTATION

The goal of the PENMAS NFE Project is to facilitate learning activities for more than 800,000 people spread out over the six most populated of Indonesia's provinces. The word *facilitate* must be emphasized. In the project area, PENMAS is moving away from the direct implementation of learning programs and building a system that will develop an environment in which these activities can more easily occur. PENMAS is making learning activities happen more easily by providing structure, encouragement, assistance, and materials. PENMAS has built an administrative structure to facilitate this learning. This structure focuses on four types of learning processes: self-study, apprenticeship, courses, and learning groups which are used in four different learning programs: Paket A (basic education program), vocational skill training, family life education, and learning fund.

The four learning programs form a basic NFE curriculum that can be expanded and changed to meet local needs. The four learning processes are learning methods that can be adapted to each learner's abilities and desires. The administrative structure forms the educational institution that encourages the use of these methods to accomplish the NFE curriculum. All together, this forms the PENMAS field implementation system.

This chapter will describe the implementation of the PENMAS NFE system at the local level. The field implementation system that is presented here is not yet fully realized by PENMAS, but parts of the system exist in every field location. The description, therefore, presents a model of the system that PENMAS is trying to achieve. As with the ten learning characteristics outlined in Chapter I, this model is useful as a guide for local PENMAS officials and volunteers. The reader will note that the processes and programs are fundamental ones which make them useful in trying to meet the basic needs of PENMAS' clients. The village level staff can see from their training

that there is more than one way to learn. This simple division into four types helps them move away from traditional instructor-led teaching. The four programs encourage the local staff to pay attention to more than one group of people or objectives. Since these programs form an outline of goverment endorsed curriculum, the local staff have an easier time mobilizing local government support. The other chapters of this book that focus on learning materials, training, evaluation, and so forth should be read with an understanding that they are components of this sytem and are designed to support the implementation of this system at the village level.

The Administrative Structure

PENMAS is a large bureaucracy that has a paid administrative structure that reaches down to the sub-district (kecamatan) level. At the local level, the structure becomes voluntary and is made up of people who live in those villages. The national, provincial, and kabupaten/kotamadya structure has been explained in Chapter I. Those resources are focused on the penilik field worker. The penilik covers an entire kecamatan, and he or she administers the PENMAS program through a volunteer network of pamongs (facilitators) and tutors (teachers and other learning resources).

The pamongs and tutors are part of Iskandar's ten basic learning characteristics outlined in Chapter I. The tutors are what he refers to as "Learning Resources." These are people who have special knowledge or skills and who are willing to share these with others. They include local craftsmen or school graduates who volunteer their time and talents to help neighbors acquire basic skills and knowledge. The pamongs are the learning facilitators. They help to organize and manage the learning activities, and they provide the leadership necessary for carrying out learning activities.

The penilik first explains his program to the village authorities and traditional leaders. He asks them to help him to identify and recruit pamongs. The penilik then works with the pamongs to help them arrange for learning activities at the village level. The pamong identifies the needs in the village for learning activities by questioning potential learners and then contacts the learning resources necessary to meet those needs. The pamongs also help to motivate learners to participate in the program. The penilik trains the pamong, and the pamong and the penilik train the tutors. The penilik continues to give advice, training and material support to the village learners through

the pamong. The penilik also helps to mobilize kecamatan support and resources for the PENMAS program. Figure 2 helps to visualize this structure.

The penilik maintains a working relationship with the kecamatan level government institutions and manages the administrative details of the PENMAS program at that level. The penilik also helps to develop support and resource allocation at this level for NFE. At the village level, the penilik makes contact with local government and traditional groups. He or she promotes NFE programs with these groups and develops resources and support for NFE in the village. The penilik also directly develops NFE learning activities at the village level, either with or without the help of a pamong. Once the group is started, the penilik will monitor the progress of the activity, but will not be directly involved.

In *Di Antara Seribu Jalan*[1], a fotonovela used to train peniliks, the following three examples are presented as ways in which a penilik arranged learning programs.

A. The women in one village were having trouble with making small purchases on credit from local businessmen. The credit arrangements made the price too high. The penilik contacted an older, well-respected woman in the village and helped her to begin an "arisan." An arisan is a traditional village system of saving where each person puts in money or rice each week. Through a drawing, one of them wins that week's savings. Eventually each participant wins the total amount and can use that to buy what she needs. The group was then formed around this activity. The penilik encouraged them to begin using the group to pursue some form of learning. They chose literacy and cottage industry.

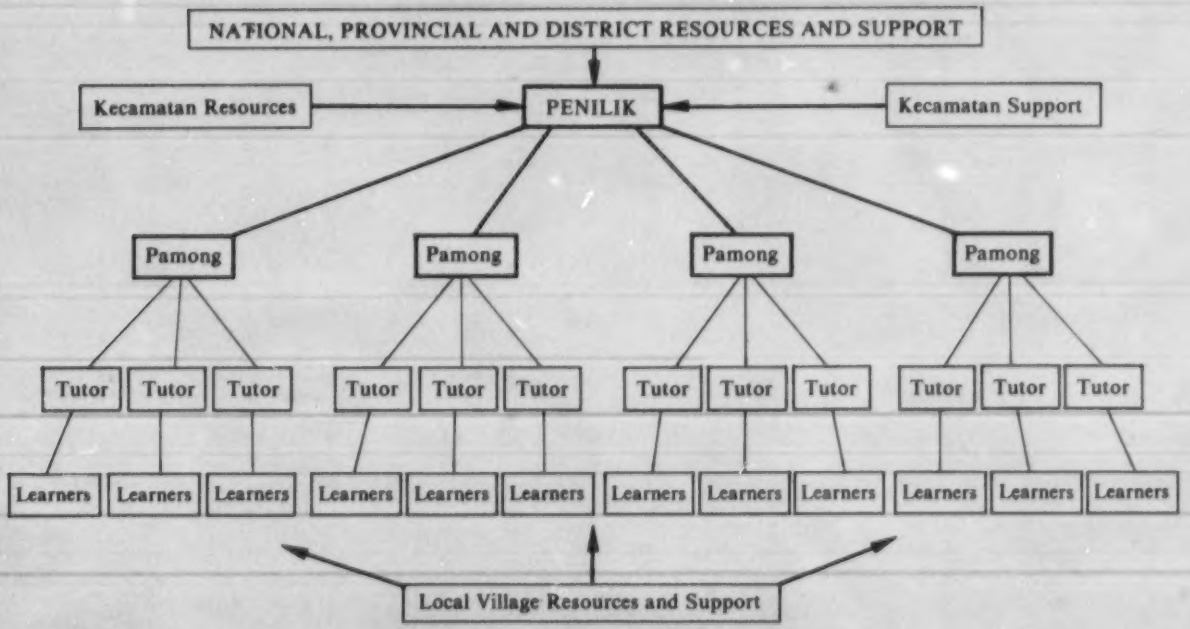
B. In another village the young men had formed a soccer team. They wanted to buy uniforms and shoes but didn't have the money. The penilik helped them to learn how to make soap and sell it. The group then used the profits to buy the equipment they needed. Since the group was formed and successful, they moved on to other learning goals.

C. Another group of young men were unemployed and out of school. The penilik noticed this and went to the local leadership to discuss this problem. He enlisted their help to begin learning groups

1. PENMAS BPKB Staff. *Di Antara Seribu Jalan* (fotonovela). BPKB, Jayagiri: Ditjen PLSPO, Dep. P. dan K. Lembang—Bandung, 1980.

FIGURE 2

PENMAS STRUCTURE AT SUB—DISTRICT LEVEL



in literacy for these young men. There was some trouble with the groups in the beginning because participants of different abilities were put in the same groups. The students who had no reading skills felt embarrassed and dropped out, but the penilik noticed this and arranged for two separate groups.

These three examples give a picture of a penilik's work. From these beginnings, the penilik builds up a network of groups and volunteer assistance. Some of the people involved in these programs become pamongs and take on the responsibility to continue the encouragement of the PENMAS learning programs. Some of the students take on the job of tutor after they have completed a program of study.

The penilik has many skills he or she must develop. The penilik must understand the PENMAS curriculum, be able to adapt that curriculum to local needs and cultural differences, promote the allocation of scarce resources to NFE, train tutors and pamongs, and develop volunteer support. In some cases, the peniliks are young, well-educated, and motivated by previous experience as BUTSI volunteers (BUTSI is a volunteer development corps that is made up of recent college graduates). In other cases, they are older, traditional educators who were primary school administrators. The ability to accept new ways of working and to learn new skills varies widely in this group. The NFE project, therefore, has put a significant amount of its resources into training peniliks.

Even when these peniliks are fully trained, a kecamatan is a large area to cover. The NFE project is providing motorcycles for the peniliks, but even this added mobility is not sufficient to allow a penilik to effectively implement an NFE program on such a large scale without assistance. The voluntary assistance of pamongs and tutors is one key to a penilik's success.

There is in Indonesian culture a traditional form of community self-help called *gotong royong*. The government has used *gotong royong* as a basis for a national system of voluntary village level help for development; however, this voluntary help is a limited resource, and there are many programs competing for this help. The local government officials are responsible for developing this *gotong royong* with some officials better at it than others. All government programs are competing for this resource; therefore, the penilik must be effective at promoting the NFE program at this level. If the local government and traditional leaders decide to back up the NFE pro-

gram, the penilik has a significant resource to call on. Without the commitment of local leadership, the penilik will not be successful.

The field implementation system rests on the penilik. Picking the right person to be a penilik is the first important step, but in a bureaucracy, there is limited choice. The second step is to train these peniliks, but the body of skills, knowledge and attitudes needed is very large. Once a penilik is trained, he or she must develop a volunteer network. This network is limited, and the competition for it is great. These are the crucial issues in the administrative structure, but the NFE project has only been able to make the issues clear, not resolve them.

LEARNING PROCESSES

The penilik is trained to encourage learning by four different learning processes: Self-Study, Apprenticeship, Courses, and Learning Groups. PENMAS stresses these four processes as a way to move NFE away from the formal structured courses that existed before. The courses are still useful, but they are only one method employed by learners in PENMAS programs. These methods can be applied to any of the learning programs explained later in this chapter.

Self-Study

For this method, the pamong first identifies the learners and their needs. With the help of the penilik, the learner is provided with the resources necessary for self-study. PENMAS encourages learners to participate and provides them with consultation on how to learn and materials to help them learn. In a sense, this is the easiest process for PENMAS to support, because all that is needed is self-learning materials. These materials are not yet perfected, so there is still much for PENMAS to do in this area. Furthermore, the learner must already be literate for these materials to be effective. PENMAS is now developing self-learning materials for many different content areas. Up to now they have been mostly simple printed materials that focused on health, family planning, agriculture, or some other development sector, but as the materials development capability of PENMAS expands, there will be more sophisticated materials available. The self-learning process is one method PENMAS uses to encourage lifelong learning by reading. Other plans hope to include radio and TV educational programs. Radio and TV were not part of the NFE project, but there are other parts of the government that are working with PENMAS on these media.

Apprenticeship

The apprenticeship process brings learners together with learning resources for on-the-job training. Usually the learners are brought to the tutor in a real work situation; however, the work situation could be developed around the learners and the tutor brought to them. For example, PENMAS could arrange for several learners to learn and work in a radio repair shop in a larger town, and then return later to their village to set up their own shops. Or, PENMAS, with the help of other local resources, could set up the beginnings of a shop in an area that is far from repair facilities, and then arrange for a skilled repairman to come to that area to train the learners on the job.

PENMAS helps the learners to identify the kind of apprenticeship that would be helpful to them and then helps them locate a tutor. PENMAS is also helping the tutors with training in instructional skills and in the production of manuals that will augment the training. The traditional apprenticeship system exists in Indonesia. PENMAS is helping this system to change its traditional restrictions on who may participate by expanding it to the new trades that are now arising in a modernizing country. Apprenticeship is a new area for PENMAS; therefore, effective methods are still in the development stages. PENMAS feels this type of learning process holds a great deal of promise for providing vocational training effectively and inexpensively.

Courses

For some very specific learning goals, PENMAS arranges formal training courses. These courses usually focus on regular government training goals, a regulated trade, or a skill that is in high demand. PENMAS regulates the courses and provides examinations for certification. The tutors are helped with training in instructional skills and by the production of manuals that augment the training.

Before the Nonformal Education Project began to change and expand, formal courses were the main activity of PENMAS. PENMAS staff are still running some formal courses, but they are trying to move away from this traditional structured method. Since most of the skills and knowledge taught in these courses is in high demand and students are willing to pay, the private sector is taking over the running of these courses. PENMAS is now becoming a certification and resource organization to this private sector.

PENMAS is also trying to move to a more open form of NFE. The apprenticeship and self-study processes are part of this move, but they are still a very small part—smaller than the number of learning activities using the formal course process. In the NFE Project the learning group process is the method that PENMAS is moving toward.

Learning Groups

The first three types of learning processes usually depend on a predetermined student need and focus on popular subjects. By contrast, learning groups promote a more open form of NFE. A learning group is ten to twenty learners who come together and:

1. determine their own learning needs;
2. design a plan for meeting those needs;
3. arrange for the human and material resources necessary to meet those needs; and
4. carry out a learning process that fulfills those needs.

The learning groups are assisted in this process by the penilik and the pamong. The learning group might come together once and dissolve after the attainment of one learning objective. The hope of PENMAS, though, is that the learning groups will continue the learning process with new objectives.

Tutor (pamong) training session

The learning group concept was developed before the NFE Project began. A group of PENMAS staff and foreign consultants

working for World Education designed and tested the method at the National Training and Materials Development Center (BPKB) at Jayagiri, Lembang, West Java. Based on the success of that project, PENMAS is now trying to encourage this process in the larger NFE Project area. The learning group concept is simple, but changing years of formal schooling experience is not. Training peniliks to use this process and encouraging this process at the village level is still proving difficult, but the PENMAS penilik still has the more traditional processes to work with while he or she is learning to use and promote the learning group process.

LEARNING PROGRAMS

PENMAS is now focusing its efforts on four different learning programs: Paket A, Vocational Skill Training, Family Life Education, and the Learning Fund. The penilik is charged with using the administrative structure to encourage these four programs using any of the learning processes described already. The four programs allow PENMAS to focus its materials development and training on these distinct areas, but the programs do overlap in some ways. Without these programs, the penilik would be left offering only a process. It is hoped, particularly with the learning group concept, that eventually a process will exist on its own, but for the current time, these discrete programs give form and substance to PENMAS activities.

Paket A

> I attend a reading and writing group twice a week. Last year I belonged to a different reading and writing group, but the other participants had attended school before and it was difficult for me to keep up. So I stopped attending. Now I attend a group with others who, like me, have not yet been to school. We used to meet in the primary school but now it is raining every day and it is too far to walk to the school so we meet in each other's houses. Soon it will be planting season and we will have to stop meeting. But, I am sure we will start again because we find what we have learned useful.[2]

The cornerstone of the PENMAS system is the Program Kejar Paket A. Kejar is a word constructed from two Indonesian words, *bekerja* ("to work") and *belajar* ("to study"). The program is meant to

2. Nancy Bergau and Fredi Munger. "Learning Programs." Jakarta: Nonformal Education/ PENMAS Project, 1980.

allow work and study to blend together and support each other. This Kejar program is formed around a set of learning materials, Paket A. Paket A consists of 100 illustrated booklets. The first twenty are a set of literacy primers in the national language (Bahasa Indonesia), and the remaining eighty form a village encyclopedia about health, agriculture, Indonesian culture and history, and other subjects of need and interest. Paket A forms a basic framework on which local government and private institutions, with help from a PENMAS penilik, can implement a literacy and basic education program. The booklets are self-contained in that the program can proceed with only general instructions, a set of Paket A, and a tutor. Many of the Paket A classes are run like a formal school class with a blackboard and chairs in rows, because there has not yet been time to train all the tutors. When resources permit, the penilik and pamongs train the tutors to use more innovative methods and materials.

The educational objectives of the Kejar Paket A and the content of the 100 booklets are as follows:

1. To aid the development of a spirit of one nation with a common purpose of development under the national philosophy of *Pancasila*. Paket A presents a view of village life that incorporates the improvements that the national development effort is now trying to make. In this way Paket A helps build in the minds of the learners a vision of the goal of the development process.
2. To teach the national language, Bahasa Indonesia. Paket A uses only the national language, and this helps teach the language to people who do not yet know it and improve the language skills of those who have a poor command of it.
3. To teach reading and writing.
4. To teach simple mathematics.
5. To teach content that supports the national development effort (e.g., health, nutrition, hygiene and sanitation, family planning, and improved agricultural practices).

Paket A is meant for illiterates and primary school dropouts. In the future, there will also be a Paket B that will be for people who have finished Paket A, primary school graduates, and dropouts from junior high school. Paket C will follow for people who have finished Paket B, junior high school graduates, and high school dropouts.

When all of these learning packages are complete, PENMAS will have a full NFE curriculum.

The Paket A program gives the field worker and his volunteer staff a program that they can use to begin nonformal education activities in the village. It is a program that they can feel confident with because Paket A has been endorsed by the government, including the President of the Republic of Indonesia and the Minister of Education and Culture. With that strong endorsement, the penilik can convince the local authorities to back the program, and this helps greatly in mobilizing the resources necessary to develop a volunteer network.

One volunteer agency which has worked closely with PENMAS in implementing the Paket A program is Dharma Wanita: a national, non-governmental, volunteer organization comprised of wives of Indonesian civil servants. Dharma Wanita has 2.8 million members including wives of cabinet ministers, governors, district and sub-

Learning group for literacy and numeracy

district officials, and heads of villages. Since beginning its program in 1976, Dharma Wanita has recruited and organized learning groups for 114,579 learners.

In the district of Wonosobo in Central Java, the wife of the district head adopted the Paket A program as her special concern. She used the extensive organizational capacity of Dharma Wanita to mobilize human and material resources and organize men and women in the hundreds of villages in the kabupaten. Since the program has a set of materials, an instructional design, and the backing of the national government, Dharma Wanita was very willing to take on the responsibility to implement the program. This district now has one of the most successful literacy programs in the country.

Vocational Skills Training

> When I first came to the town I could not find a job. For a while I just spent my days with other youths who, like me, had no jobs and few skills. Pak Adinan suggested we might like to learn metal work from Pak Yusuf, the local metal smith. We started coming to his shop every day. He taught us how to cut

Vocational skills training course in basket weaving

> and solder sheet metal. Now we can make spray cans for pesticides. We sell the cans at the nearby market.[3]

To supplement the Paket A program, PENMAS manages and encourages vocational skill training programs in home industry and marketable skills. Tutors who have knowledge of the skill participate in a course, learning group, or apprenticeship with people who want to learn that skill. The tutors are reimbursed for their participation by the students or by a government organization that supports the project. Some of the classes are simple baking courses where women learn to make sweets and savories for sale. In some, basket weaving or sewing for profit are taught, and people use these skills to make money.

In one case study in West Java near the town of Subang, a large number of villagers learned to make straw mats with colored designs. Now, middlemen from the larger market towns know to come to that one village. The villagers have since begun to try to take over the middleman's position to increase their profit. Batik design, brick-making, home gardening, primary food processing, motor maintenance, bicycle and radio repair, carpentry, erosion control and sanitation are all types of skill training that PENMAS has facilitated.

Family Life Education

> In my learning group we are sewing school uniforms to sell. We began meeting informally about a year ago. At that time we had an 'arisan.' After a few months we found a neighbor who was willing to teach us how to sew. She found us a sewing machine and we took turns practicing what Ibu Tini taught us. Now we are skilled enough to sew school uniforms which we sell to people in the community. We are saving the money we earn to buy a second sewing machine.[4]

PENMAS recognizes that women deserve special attention. The role of women is critical to Indonesia's development, and women are, quite often, given secondary attention by educational institutions. This program is strongly supported by Dharma Wanita who provide the necessary human and material resources. At the local level, important women lend support and encouragement to a general program that helps women to participate in the development process.

3. Ibid.
4. Ibid.

PENMAS helps Dharma Wanita by supplying learning materials, training, and administrative support.

Family Life Education Program sewing course

Elements of the Family Life Education Program (Pendidikan Kesejahteraan Keluarga) are similar to the Paket A and the vocational skills programs, but there are also special parts of the program that focus on the knowledge, attitudes, and skills that women can use most successfully to further the development of their family and their community. Family planning, nutrition, child care, and health are some of the subjects that make up the Family Life Education curriculum, but the literacy of the Paket A program is also considered important for women. The vocational skills and learning fund programs that can lead to income-generating activities are also stressed. The Family Life Education Program is really a program that focuses on the concerns that are special for women and uses all of the other PENMAS programs to benefit women.

The Learning Fund

Last year in Central Java a group of women who enjoyed gathering as a social group decided to try to produce and sell handicrafts as a way of increasing their families' incomes. With

the help of the local PENMAS penilik, they formed a learning group to study needlecraft such as applique.

The local women's organization and the local community organization committee approved of the women's efforts and assisted them in acquiring Rp. 100,000 from the PENMAS learning fund. The women raised the matching Rp. 100,000 from among their own group members.

The community in which the women lived is at the edge of a large city. People from this city often want to buy and sell appliquework and other needlework used as room decorations. Needles, thread, soft cloth and other supplies needed for producing applique are easy to acquire in the women's community. Also, not too far from their community is a market in which such products can be readily sold. The PENMAS field worker also found a local volunteer who agreed to teach the women some basic applique techniques and assist them in improving their needlework skills.

The PENMAS penilik also was diligent and consistently helpful in matching the women's learning needs with local resources and advising them on marketing and financing their program. The learning funds came promptly at a time when they were needed to buy supplies for the project.

This learning or income-earning group continues to operate. They have already sold enough quality goods to make a small profit. The group is planning to revolve their loan and provide funds for another group.[5]

PENMAS recognizes that knowledge and skills are only the beginning of the learning process. The Learning Fund Program is meant to help these learning activities become productive income-generating activities. The learning fund provides up to $240 as a loan to groups that wish to turn their learning into a small-scale enterprise. This amount of money is a significant sum in rural areas.

The learning fund is meant to be a flexible program that can bend to meet local needs, and the decision about which group will receive the fund is made at the local level. PENMAS provides the

5. Nancy Bergau and Fredi Munger. "The Learning Fund." Jakarta: Nonformal Education/PENMAS Project, 1980.

following general policy that is interpreted in light of local conditions by local authorities. The fund should, under these criteria:

- create productive skills
- generate income
- relate to other local development projects
- benefit the least educated and poorest members of a community
- involve large numbers of people
- represent an innovation in nonformal education
- originate in and be supported by the community it involves
- utilize local resources
- lead to a multiplier effect
- be capable of replication
- assist a locality previously unsupported by the fund
- be supported by the local government

In addition, there must be joint approval of the project by both the district or municipal PENMAS office and the local government. There must also be some evidence of some local commitment. This commitment can be broadly defined, but the hope is that at least one-half of the total costs of the activity will come from sources other than the learning fund.

The learning fund has supported cottage industries such as sewing, weaving, and food processing and skill trades such as welding and motorcycle repair. PENMAS encourages the learning fund groups to engage in a total program of learning and working. The group members can improve their literacy, accounting, and marketing skills along with learning a new trade. PENMAS is ready to help them add these other elements to their learning program.

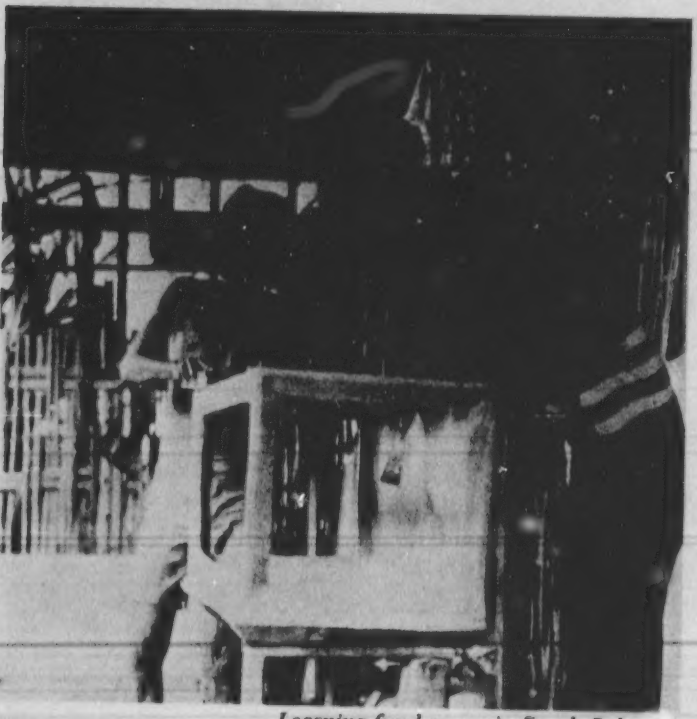
Once a group has begun to make a profit, they pay back the learning fund loan by giving that money to a new group. Thus, each group acts as an example to others and provides a new learning fund, and the learners of the first group can become the tutors of a new group.

In some cases, the learning fund has proven to be too small to help a group. Some groups have been unable to become profitable, and the local level decisions on who gets the fund is sometimes biased. But the Learning Fund Program holds great hope for making NFE a more productive activity for people, and PENMAS is committed to making the idea work. The central problems affecting the program

are poor decisions on who should get the fund and a lack of marketing knowledge and skill at the local level. Some groups are successful in learning and producing but fail to market their products successfully. This is a new program, not only for PENMAS, but for NFE in general. The solutions to the learning fund's problems should come with time.

The Total PENMAS System

The Kejar Paket A Program provides a basic education experience; the Vocational Skills Program provides a specific work-oriented education experience; the Family Life Education Program does both of these with a special emphasis on the needs and potential of women; and the Learning Fund Program provides the capital necessary to make this learning productive. Any learner can enter this



Learning fund group in South Sulawesi

total system at any point that meets his or her abilities and needs, and that learner can go as far as he or she wishes. In this way, PENMAS is trying to provide the potential for an NFE experience tailored to each individual and each group. Some learners need a very firm, clear program, and some tutors feel more comfortable with that too. In other cases, a more informal learning process is appropriate. The total PENMAS program is trying to provide that potential.

This attempt to provide for all the different learning needs with methods that are suitable to all the learners and their resources is a major strong point in the PENMAS NFE Project. This also makes the achievement of its goals difficult. With only one penilik serving 20,000 or more learners, there must be a strong commitment at the local level for NFE. That penilik must be very well trained and highly motivated. Time is needed to build that commitment and to train the penilik, but the NFE Project has given PENMAS many of the skills and structures that it needs to complete this process. The following chapters will present the details of how this is taking shape.

Major Sources

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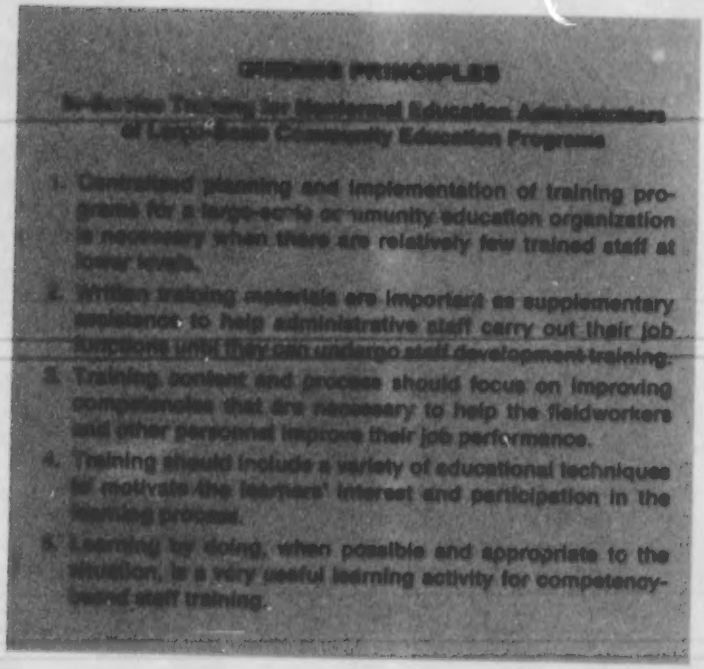
IN-SERVICE TRAINING



GUIDING PRINCIPLES

In-Service Training for Nonformal Education Administrators of Large-Scale Community Education Programs

1. Centralized planning and implementation of training programs for a large-scale community education organization is necessary when there are relatively few trained staff at lower levels.
2. Written training materials are important as supplementary assistance to help administrative staff carry out their job functions until they can undergo staff development training.
3. Training content and process should focus on improving competencies that are necessary to help the fieldworkers and other personnel improve their job performance.
4. Training should include a variety of educational techniques to motivate the learners' interest and participation in the learning process.
5. Learning by doing, when possible and appropriate to the situation, is a very useful learning activity for competency-based staff training.

Each of the six project provinces in Indonesia developed its own in-service training for provincial staff. This section will discuss the in-service staff training that occurred within each province.

The general goal of training for PENMAS personnel under the project is: "To increase the ability of PENMAS personnel to better serve the educational needs of the people of Indonesia through an out-of-school nonformal education program." During the life of the project, every person working for PENMAS in the project provinces received in-service training. Although PENMAS staff had received

training before, it had not occurred on such a large scale; 2,500 staff were trained annually under project auspices. This means there were over 110,000 person days of training planned annually during the four-year project.

Generally, the training that occurred in the provinces was directed at provincial personnel. Occasionally workshops were conducted at the national level to give additional training to provincial staff members. Training sessions in the provinces were carried out by Balai PENMAS training staff. The personnel that participated in training sessions included all levels of provincial PENMAS staff.

PENMAS personnel exhibit a wide variety of formal educational experiences. A forty-five-year-old penilik may have only nine years of formal education, whereas a twenty-five-year-old penilik may have as many as sixteen years of formal education. Staff members at the provincial and national levels are generally teacher college graduates.

In preparation for the project, the World Bank, in conjunction with PENMAS, identified various content areas for PENMAS field staff training. These training needs reflected the competencies required by PENMAS peniliks to be effective community educators.

Peniliks received the largest amount of training during the project. Over 2,000 peniliks attended semi-annual, two-week training sessions during the four years of the project. Other staff received a week to ten days of training each year of the project. Peniliks received more training relative to other staff because they are the crucial link in the PENMAS educational delivery system, supervising PENMAS programs at the grass roots level.

Under the NFE Project penilik training had a variety of objectives which focused on the following content areas:

- objectives and methods of nonformal education
- assessing learning needs
- establishing learning groups
- creating case study material
- developing learning materials for provincewide use
- using and testing new learning materials
- developing an understanding of how to use learning fund assistance
- developing training activities for learning group leaders
- applying evaluation techniques

Training of other personnel implemented during the project included the following:

1. *District Level Administrative Personnel*
   This training focused mainly on introducing staff at this level to the objectives and methods of this project and to NFE in general. The goal of the training was to improve the capacity of the district PENMAS administrators to support the penilik.
2. *Learning Activities Center Staff*
   Since these centers serve as a back-up to the penilik in producing learning materials and in training learning group facilitators, their staff required training in learning materials production and training methods.
3. *Balai PENMAS Staff*
   Staff training for the provincial centers focused on preparing the staff to design and implement effective training programs, to develop learning materials, to carry out administrative duties, and to evaluate provincial programs.

Organization of Training in the Provinces

Training for provincial PENMAS staff occurs at the newly built Balai PENMAS centers. Each of these provincial offices is divided into five working groups which have various responsibilities for PENMAS programs under the project and otherwise. The five working groups—administration, management, evaluation, learning materials, and training, all share training activities. Generally, a training workshop is organized by the training group which also has responsibility for presenting new training methodologies. Other working groups present activities related to their areas of responsibility. For example, the learning materials group conduct training sessions about developing, testing, and using learning materials. In this way, funds for training are shared equally among all working groups.

In addition to the in-country staff training that occurred in the Balai PENMAS and elsewhere, the project included overseas training for selected PENMAS staff and for selected staff of six IKIPs. This training is discussed in greater detail in Chapter VI, but at this point it deserves some mention. Provincial working group leaders and Balai PENMAS directors received training in the United States at the University of Massachusetts and other universities. Their

training concentrated on their areas of work and occurred early in the project which enabled the recipients to make use of it as the project was implemented.

The head trainers of each province received two months of overseas training. The goal of this training was to provide the trainers with knowledge and skills in NFE methods and to help them become better trainers. This period in the U.S.A. was beneficial. The trainers sharpened their training skills and learned a common vocabulary and philosophy.

Major Tasks for Trainers

The Balai PENMAS training staff faced two major challenges. The first challenge was responding to immediate project implementation requests. The second challenge involved the design of a responsive, high quality training system that would meet the needs of PENMAS personnel not only during the life of the project, but over the long term.

Immediate tasks for the first challenge included:

1. Providing support for trainers when implementing new ideas. For example, the staff who went for overseas training tried out new participatory training activities that they developed and adapted for their region. At times, there was resistance from staff members who were not familiar with the new techniques.
2. Assisting non-trainers in learning more active training techniques.
3. Facilitating communication within the training team and between the working groups at the Balai PENMAS in order to design and implement a coherent training program that addressed relevant training needs of PENMAS personnel.
4. Solving logistical problems encountered during the initial rounds of training. At times there was an insufficient supply of necessary equipment (chairs) or food when needed.
5. Assessing training needs and designing programs for district level PENMAS staff.

The second major challenge, to design and operationalize a responsive, high quality training system, involved two main issues:

- Trainers and other provincial center staff required an understanding of training design, training techniques, setting goals

and objectives, creating training activities and methods of evaluation.

- A follow-up and feedback system was needed so that trainers would know what effect their training activities had on PENMAS activities and staff.

These two issues were intertwined. In the first nine months of in-service training, three activities took place which were intended to affect both the immediate and longer range challenges. These activities were:

1. A needs assessment conducted at each Balai PENMAS to assess the provincial capabilities.
2. The production of a basic manual, *A Training Guide*, for trainers to help them organize and plan a training activity.
3. The training of Balai PENMAS staff in how to plan and implement a training activity, how to design future training workshops for district PENMAS staff, and how to aid trainers in the development of their training programs.

IN-HOUSE TRAINING PHASE

The major staff development focus of the project was penilik training conducted for an intensive two-week period every six months. After the penilik received three rounds of this type of training, a decision was made at the national level to decentralize the penilik training function to the district level and to test a field-based training design. Thus, this section will essentially describe the first phase of training conducted at the Balai PENMAS (in-house) and the next section will describe the training conducted at the district level, with the majority of activities implemented during the peniliks regular work schedule (field-based).

Development of a Training Guide

> The leader of the learning materials working group was beginning his activity concerning learning materials. He stood in front of the peniliks and lectured to them about the different types of learning materials and how to use them. He did not hold up examples of the different types of learning materials as visual aids. The head trainer had a look of despair.

As the above description illustrates, one role of the leaders of the various Balai PENMAS working groups is to design and implement training activities. A trainer's manual seemed to be an appropriate

way to meet the need for a reference in the Indonesian language that described the relationship between training needs, goals, objectives, methods, and evaluation.

Although the group leaders were specialists in their own particular work area, they did not receive training in how to train, therefore, they needed resources to help them learn techniques other than lecture. Hence, *A Training Guide* was required not only as a reference for staff working in the training group, but for all staff involved in training activities, including head trainers. The manual had two goals:

1. To help trainers learn more about training, such as, goal setting, designing training sessions based on objectives, and using NFE methods.
2. To provide the trainer with an idea of the responsibilities of a trainer.

This manual dealt directly with several of the immediate issues confronting the training component of the project. As a reference document, it provided support for trainers and helped non-training specialists to understand sound training methods. The manual also served as an outline for a series of workshops conducted at the provincial centers for staff of all the working groups. The focus of these workshops was planning and organizing training activities.

Balai PENMAS Staff Training

A series of workshops were planned and conducted for Balai PENMAS staff to reach these objectives: to be able to use *A Training Guide* as a resource, to assist head trainers in designing training programs, to discuss the use of participatory training activities and how they could be used in staff training, and to help provincial staff members identify training needs as a basis for designing objective-based training programs for district level PENMAS staff.

Training design workshops were held in the provinces of the project over a period of about three months after the head trainers returned from the United States. In addition to the training work group, members from each of the working groups of the Balai PENMAS were requested to attend these workshops. By including the other staff, more people had an opportunity to learn how to design a training activity. Their participation enhanced communication between working groups regarding the content of upcoming training sessions and exposed as many people as possible to the usefulness of

planning by goals and objectives. The design workshop usually took three or four days and dealt with the different types of training needed by different levels of PENMAS staff.

The workshop focused on content areas, such as, determining learning goals and objectives, planning activities to meet those goals and objectives, evaluating training, and outlining the logistics of implementing the training design. In some cases trainers surveyed staff training needs; in other cases learning needs were based on competencies needed to carry out different staff roles.

Workshop Assessment

The workshop series went well. The immediate and long-range project needs set as the focus for the series of workshops were met by the exercise. Other results of the workshop included:

1. Balai PENMAS staff, who did not have previous experience in participatory activities, had an opportunity to participate in an active learning situation.
2. Participants learned how to set goals and objectives. The actual practice of writing goals and objectives for participants' own work was the most effective means of transferring this skill.
3. Several members of the Balai PENMAS staff had the opportunity to meet with the training specialist. This helped to establish a basis for the development of good working relationships throughout the duration of the project.

Developing Participatory Training Methods

Following the training design workshops, the emphasis of the training component shifted to training methods and working to improve penilik training. Much effort went into helping trainers develop methods that suited their situations. Most trainers soon realized what one trainer said: "We have tried many new training activities. Some of them have worked well for us. Some of them haven't. We need to learn and learn well how to use one method before trying another. Better to do a few well than many poorly." Experienced trainers only needed minimal feedback when they implemented an activity. Inexperienced trainers, however, learned better by observing an activity, such as a role play, at a workshop. Additional learning mechanisms included writing and distributing short manuals that described some training techniques. Examples of

some training techniques and activities implemented during the project included the following:

Brainstorming. This activity was used frequently during the project. Brainstorming was used to help determine learning needs; to list problems that needed solving; and to support other activities, such as small group discussion. The main advantage of brainstorming was the increase in opportunities for participants to contribute to training. Brainstorming worked well in situations where groups had tried to determine various alternative solutions to problems. The biggest problem with this activity was the initial tendency on the part of the trainers to criticize the suggestions of participants during the suggestion-making process. Brainstorming, unsuitable for large group activities, was a problem because most training situations had large groups.

Simulation Games. Simulations were tried in penilik training in several different provinces with varying success because they require time to prepare and to implement. Three or four hours were needed to carry out some simulations.

Field Practice. This was the most successful part of penilik training. At the field site, peniliks had an opportunity to apply some of the theory and ideas that had been discussed in the classroom. During their three to five-day field trip in the village, the peniliks completed exercises that included assessing learning needs, developing learning programs, and determining and solving possible village community education problems.

Results of the village field practice were usually made available to the village education staff and often proved helpful to community education programs. Field practice sites changed with every new training group so that no one village was used too frequently. Field practice had the advantage of getting people out of the classroom and giving them a chance to apply what they had learned. Learning by doing, followed by discussion of the activity by participants and trainers, was a very effective learning tool. The biggest problem was the size of the training groups, often over forty. This presented logistical problems and sometimes tended to intimidate and overwhelm the village.

The idea of using a field-based practicum was tried by several of the provincial centers. The concept was also utilized in the Bojonegoro Model discussed in another section. Field practice sessions,

developed as a solution to meet short-range project needs, became a way of improving the long term quality of in-service training in PENMAS.

Role playing. This activity was frequently used to give the training participants an opportunity to experience other roles or to examine problems in interpersonal communications. Usually the participants profited from the use of role playing. However, this activity does not lend itself to use with large groups. One problem was planning sufficient time at the end of the activity for analyzing what occurred during the role play. Analysis and discussion are important steps and vital to the learning process.

Case Study. Case studies were used mainly in penilik training as an extension of the field practice activity. The goal was to have peniliks produce a written case study on a PENMAS learning group. The case study was done cooperatively by a small group of trainees working with a learning group. In addition to learning how to write a case study, peniliks learned research techniques, experienced several participatory training activities, learned how to implement evaluation and developed questionnaires. All of these skills the peniliks needed in their work and, thus, in one activity had the chance to try them out. The disadvantages of this activity are similar to those mentioned under the field practice activity.

The training methods mentioned here are some of the methods that were used by provincial trainers during the project. These methods dealt with the immediate need for active and participative training. At the same time they became part of a solution to longer range demands for training the PENMAS staff.

Summary

> After the trainer left training, he compared this training to one conducted here over a year ago. Then, participants sat as if made of wood; now questions flowed and learning was active. People were happy. As he walked down the road, there was laughter in the breeze. He recalled one participant's remarks, "This training seems to be for learning, not just for sitting."

As the above vignette suggests, a significant change occurred in the ability of trainers to use participatory training techniques; consequently participants were also affected. In addition to this change, training created a team spirit and feeling of belonging for PENMAS personnel. This was extremely important to a large organization like

PENMAS provincial staff at UMass testing their simulation design for penilik training

PENMAS because the staff needed to know that they were part of the organization and that the organization served them as they served it.

Although there was much progress during the project, some areas need further consideration:

1. No feedback system was established for the training in the provinces. This can be attributed to insufficient time to plan a system. For example, at the beginning of the project there were plans for one province to do penilik training fifty weeks a year and conduct sixteen weeks of training for various types of personnel. This meant there was no time remaining to set up a mechanism to determine the effectiveness of training which is critical information for planning the next round of training. Since the average training day was 12 hours, trainers did not have time to meet and discuss formative evaluation concerns while training was in progress.
2. Trainers needed opportunities to exchange notes on training experiences. No time or money was budgeted for seminars for trainers to compare notes; there was no policy of information exchange between the provinces.
3. Many of the training staff had more than one job responsibility with PENMAS or other government agencies. This often meant that an individual, crucial to performing a particular function, could not always spend full time on project activities.

However, most significant is the accomplishment of one of the major project objectives, to improve the training of peniliks. An unintended outcome of the training activities went beyond the achievement of quantitative targets of training large numbers of peniliks for two weeks every six months. After three rounds of this type of training, the peniliks had learned the basic nonformal education theories and had a good understanding of their job and PENMAS, but they needed more practical field activities to practice what they learned. Therefore, when the decentralized model was pilot tested, a field-based training design was also tried. One example of a field-based design is the Bojonegoro Training Model described in the next section.

GUIDING PRINCIPLES

Field-Based Training

1. The value of field-based training is directly related to the ability of the training design and the trainers to respond to the experience of the trainees in their work in the field and to incorporate that experience in training materials and methods. Structured interaction and interdependency of field experience with formal in-house training sessions are essential components of such a design.
2. Given normal limitations on the availability of supervisors/trainers for follow-up and monitoring of fieldworker progress, field-based training must seek additional resources for support of trainees. Such resources can include trainees themselves, meeting at regular intervals in small groups without a supervisor/trainer to assist each other in progress reporting, problem analysis and solution.
3. Field-based training should be viewed as continuous staff development and evaluated in terms of the degree to which it addresses real work situations and job tasks of fieldworkers. On-going assessment and revision of field-based training is essential for both short- and long-term effectiveness.

The Bojonegoro Training Model

The Bojonegoro Training Model was developed in response to a PENMAS need to prepare peniliks in the formation and support of village income-generating groups. Start-up funds for such groups were to be provided by PENMAS. The activities of each group were to include a learning component, but the assumption was made that most members of each group would have skills to contribute to a small business. The role of the penilik, the PENMAS field worker, was to identify potentially viable groups, to assist in their formation, and to support and monitor their development.

This penilik training need occurred simultaneously with a decision by PENMAS to move toward a decentralized training system. In the past, large numbers of peniliks had been trained together for two-week periods at the provincial PENMAS centers. The decision

was made to conduct future training at the district level. Trainers of the peniliks would be the PENMAS district staff. These district trainers would require additional training themselves if they were to be successful in preparing peniliks for their new role.

Finally, the decentralized training also called for a more direct and immediate relationship between the peniliks' training and their work, resulting in a significant change in the number and sequence of training days. PENMAS decided to experiment with various types of field-based training, combining several days of intensive, in-house training sessions with one or two weeks of on-the-job field work by each penilik.

The Bojonegoro Training Model is only one of several possible models to meet these three important needs: (1) to prepare peniliks in forming and supporting income-generating groups; (2) to decentralize the PENMAS training system; and (3) to provide a field-based, action-oriented design that would make training an integral part of the penilik's day-to-day work activities.

The Bojonegoro Training Model was designed as a total six-month training program. It begins with five days of in-house training whose major goal is to inform the penilik about the program and to prepare the penilik to form income-generating groups that have a reasonable chance of success and meet PENMAS criteria. In the month following the five days of training, peniliks are asked to select potential groups and assist these groups in writing a program plan and preparing a proposal for funding. After two weeks back in the field, peniliks meet for one day with other peniliks in their area to discuss their progress and problems, and to receive advice from each other.

The remainder of the training follows the same general pattern. Each month the peniliks meet with district PENMAS staff for two days of additional training. Part of these two days is spent in reporting on past activities and making plans for the future. A major portion of the two days training involves information and learning activities related to the further development and supervision of the income-generating groups. Between these training sessions, or at about the middle of each month, peniliks meet together in small area groups for joint problem solving.

The training materials are organized by learning modules. Each module includes a statement of learning objectives, time and mate-

rials needed, description of the learning activity, directions for the facilitator or trainer, and materials for the penilik. In addition to the learning modules for in-house training, the model includes five self-instructional modules for the peniliks to be used between monthly training sessions as a part of their field work. These modules are focused on common problem areas: management, bookkeeping, marketing, credit unions, and cooperatives. They provide information on these topics and ask the penilik to complete the field exercise related to the topic. For example, the self-instructional module on management presents basic management guidelines and procedures and asks the peniliks to assist their groups in establishing good management procedures. These self-instructional modules become the basis for further training in the monthly sessions with the district PENMAS staff.

The summary below illustrates this six-month design:

Pre-Assessment:	Peniliks complete information forms about potential income-generating groups in their area before initial training.
Initial Training:	Peniliks receive five days of in-house training by PENMAS district staff on forming groups.
Two Weeks Later:	Peniliks meet in small groups for joint problem-solving.
Month 1 Training:	Problem solving and planning; training focused on management. Self-instructional module for field implementation on management.
Two Weeks Later:	Peniliks meet in small groups for joint problem-solving.
Month 2 Training:	Problem-solving and planning; training focused on bookkeeping and budgeting. Self-instructional module for field implementation on bookkeeping and budgeting.
Two Weeks Later:	Peniliks meet in small groups for joint problem-solving.
Month 3 Training:	Problem-solving and planning; training focused on marketing. Self-instructional module for field implementation on marketing.

Two Weeks Later:	Peniliks meet in small groups for joint problem-solving.
Month 4 Training:	Problem-solving and planning; training focused on credit unions and cooperatives. Self-instructional modules on possible formulation of credit unions and cooperatives.
Two Weeks Later:	Peniliks meet in small groups for joint problem-solving.
Month 5 Training:	Problem-solving and planning; training focused on evaluating progress. Self-instructional modules on evaluating one of their income-generating groups.
Two Weeks Later:	Peniliks meet in small groups for joint problem-solving.
Month 6 Training:	Problem-solving and planning; training focused on evaluation of six-month program and recommendations for the future.

Since this comprehensive six-month program for peniliks requires skilled and knowledgeable trainers, the model also includes a guide for training facilitators. This guide is designed for use by PENMAS provincial staff in preparing district staff as facilitators for penilik training. Thus, the model contains three sets of materials:

1. For the provincial PENMAS staff: A *Guide for Training Facilitators,* to be used in preparing district PENMAS staff in training peniliks.
2. For the district PENMAS staff: A *Facilitator Handbook,* to be used in training peniliks in the six-month program.
3. For the peniliks: *A Penilik Handbook,* on forming and supporting income-generating groups.

The products of the Bojonegoro Training Model have been described above, but the process of its design also illustrates PENMAS' progress under the Nonformal Education Project. The model is an example of the growing capability of PENMAS to bring together skilled resources for a common goal and reflects the increased institutional capacity of PENMAS developed during the project. Members of the design team included staff of the Surabaya provincial PENMAS training center, who had received specialized training under the project, three faculty of IKIP Surabaya, who had

received Master's level training in nonformal education, two UMass consultants, who had worked with the project for several years, and two faculty members of Airlangga University, who acted as technical resources in economics. As a group, the design team represented many years of PENMAS training experience and learning.

All members of the design team were involved in an initial assessment of penilik and income-generating group needs, resources, and constraints—visiting several districts to interview group members, peniliks and other support personnel. All were involved in consolidating this information, setting goals and objectives for training, and developing the strategies and materials for the training modules. Most participated in the pilot testing of the model in Bojonegoro and in the evaluation and revision of the materials.

The Bojonegoro design team is an example of the resources which exist now in all the provinces of the PENMAS program: individuals who have worked with projects and received intensive training in PENMAS goals and methodology. The Bojonegoro approach is a clear illustration of how such resources can be utilized, both nationally and regionally, in accomplishing current and future PENMAS goals.

Summary of In-Service Training

As illustrated in the previous sections, PENMAS demonstrated the ability to achieve the project goals for in-service training. The Balai PENMAS staff trained large numbers of personnel that included peniliks and district education officers, the chiefs of the sections at the sub-district level of the Ministry of Education and Culture and the Community Education section chiefs. The training of these personnel was conducted for short, intensive periods of time at the provincial PENMAS centers several times a year; consequently, the Balai PENMAS staff, during the first phase of in-house training, had little time to develop a feedback system even though feedback was recognized as critical information for planning future rounds of training. So, when the training function was decentralized to the district level, a feedback system was incorporated in the model. Thus PENMAS trainers were able to focus on ways to improve training, such as conducting needs assessment at the field level of implementation. As of this writing, The Bojonegoro Training Model is ending its pilot testing stage and will most likely be adopted and adapted by the other Balai PENMAS.

DEVELOPING THE CAPABILITY OF THE IKIPS IN NONFORMAL EDUCATION

GUIDING PRINCIPLES

Development of Curricula for Training NFE Fieldworkers at Formal Institutions of Higher Education

1. The institution of higher education (IKIP) and the government community education organization (PENMAS) need to establish a close working relationship with shared goals, mutual support, joint planning, and common utilization of community resources. Both institutions have a common interest in developing a training program which produces effective fieldworkers.
2. The IKIP teaching staff need training in using participatory teaching techniques and learning materials so that their teaching will model the participative, learner-centered philosophy of nonformal education.
3. The curriculum design should be based upon:
   a. an analysis of field competencies needed to perform the job of fieldworker effectively.
   b. an integration of classroom activities with field activities which continue throughout the year.
   c. a model that is responsive to national goals, community needs, and socio-economic conditions.
4. A feedback mechanism should be integrated into the curriculum design so that the results can be used as an on-going basis for program improvement.

An innovative aspect of this project is the cooperation between the IKIPs (Institutes of Teacher Training and Education) and PENMAS. PENMAS is working with six IKIPs, one selected from each

of the provinces involved in the project. In most cases, the IKIP is located close to the provincial office of PENMAS to facilitate interaction. The IKIPs provide the following services to PENMAS:

1. Pre-service training of future PENMAS employees—peniliks for the sub-district level and district level supervisors.
2. In-service training and staff development activities for PENMAS employees.
3. Research and materials development such as case studies in nonformal education.
4. Cooperation and reciprocity between PENMAS and IKIP personnel—IKIP staff who received masters degrees act as consultants to PENMAS.
5. Introduction and integration of nonformal education into the IKIPs and subsequently into the formal system.

In turn, PENMAS provides:

1. Funds for the development of curriculum in nonformal education at the IKIPs.
2. Opportunities for field practice and research for IKIP staff and students.
3. Training through opportunities to receive overseas training and through local workshops.
4. Employment opportunities for IKIP staff at PENMAS as consultants.
5. Administrative links with PENMAS that will strengthen the role of nonformal education at the IKIPs.

What is of particular interest in this collaborative relationship is how a formal education institution developed a program to train nonformal education fieldworkers. Historically, the primary focus of the IKIPs has been to train teachers for secondary schools and colleges, although some IKIP graduates chose occupations other than education. The departments at the IKIPs most closely akin to the philosophy and practice of nonformal education are the Social Education and Out-of-School Education Departments. These departments offer three- to five-year academic and theoretical courses, usually to students seeking employment in urban government agencies. To integrate nonformal education into this traditionally academic program, a practice-oriented curriculum had to be designed

and the IKIP teachers had to learn different approaches and attitudes toward community education.

Curriculum Design

The most immediate goal of the project was to design a curriculum for a one-year program entitled the D1 diploma course. As part of the cooperation between the IKIPs and PENMAS, this pre-service training course was designed for students who upon completion could be directly employed by PENMAS as peniliks. The "new" D1 curriculum was to be performance or competency-based emphasizing the development of specific skills. Therefore, the important question for the IKIPs was "How can a nonformal education, competency-based curriculum be developed?"

Two IKIPs were appointed to develop a national model for the "new" D1 curriculum. Each of the two took a different approach in developing the program. The process of developing the "new" curriculum began for both of the IKIPs with the identification of competencies that would describe what nonformal education fieldworkers need to know and need to be able to do. The staff at one IKIP went directly to the field and questioned peniliks about what behaviors are necessary to be an effective penilik. The other IKIP gathered a list of competencies identified by administrative personnel of nine agencies (including PENMAS) that might need the expertise of nonformal educators. From a lengthy list of competencies, both IKIPs clustered and refined these competencies to fifteen. These competencies were then integrated with the existing course titles such as Group Dynamics, Nonformal Education Methods and Survey Techniques. Following this step, a suggested list of course syllabi with course objectives, teaching and learning activities, materials, and evaluation techniques were identified for approval at a national workshop.

At the national workshop, representatives from the six IKIPs met to discuss, critique, evaluate, and approve the model D1 curriculum. Following this workshop, each IKIP was responsible for adapting and implementing the nonformal education program to suit their own departmental and provincial needs. After approval of the general D1 curriculum design, two implementing questions arose:

- How will the IKIPs develop a field practicum?
- How will the IKIP staff be trained in nonformal education so that they can teach the "new" curriculum?

Field Practicum

A most significant feature of this program is the field practicum because it provides a means of feedback and evaluation from the community to the IKIPs as well as continuous practice for the students. Though the field practicum varied from IKIP to IKIP, certain characteristics described below were consistent throughout.

Integration of classroom activities with field activities. The IKIP staff, with the approval of the peniliks, wrote up a program of skills or tasks that they wanted the students to accomplish in the field. These tasks were coordinated with in-class activities. The goal of this method was a full integration of theory and practice.

Weekly field practice throughout the academic year. Contrary to the formal teacher education curriculum that provides a practicum at the end of the academic year, the D1 program was instituting a continuous, year-long field practicum. The students needed practical community education experience to better understand how to adapt and apply theory learned in courses at the IKIP. The IKIP staff also needed a comprehensive field practicum in order to evaluate the academic curriculum, the tasks assigned to the students in the field, and the extent to which the program was relevant to community needs. Both the IKIP staff and students needed to develop an "attitude" appropriate to nonformal education.

Field supervision by PENMAS peniliks. The PENMAS peniliks attended a number of working sessions at the IKIPs to discuss, evaluate, and approve the practicum plans. Particular attention was paid to appropriate methods for evaluating students in the field and for evaluating the practicum at the end of the year. The peniliks emphasized during these sessions that when in the field, the students should see themselves as working for PENMAS, not for the IKIPs.

Evaluation of the field practicum. Both the ongoing and the final evaluation of the program by the IKIP staff, students, and peniliks emphasized the significance of the field practicum. For example, in the middle of the academic year, students informed the IKIP staff that people in the community wanted to learn to read, but that the students felt unprepared to teach them. An experienced literacy education teacher at the IKIP then provided the students with some sessions on how to use literacy materials and methods.

At the final evaluation, the students' evaluation of the program indicated that while the field practicum had been the most beneficial

part of the D1 course, they had not felt the IKIP program was relevant to work in the community. One of the outstanding criticisms from both the students and the peniliks was that the community and the community leadership had not been involved in the planning of the program or sufficiently informed about the nature of the program. The students thought the community leadership was somewhat uncooperative, uninterested, or just misinformed about the program. The community itself was sometimes uninterested or else would ask the students to do too much in too short a time.

Essentially, the students' evaluation suggested two important concerns when planning and implementing a community-based field practicum from the point of view of an institution of higher education: (1) the need for the IKIP staff to get to know the community and (2) the need for community participation in the development of any nonformal education program within the IKIP curriculum or within an institution of higher education in general. These were valuable lessons for the first year of the program.

Staff Training in Nonformal Education

The second critical question was: How will the IKIP staff be trained in nonformal education teaching and learning methods so that they can teach the "new" curriculum?

The approach to staff training included staff development workshops on writing unit lesson plans, on writing and practicing nonformal education teaching and learning activities, and on designing and implementing nonformal education research. The workshop approach was chosen for a number of reasons. First, the project spanned six provinces, each with its own IKIP, and it was important to have some consistency in their staff development programs. Second, the first series of workshops were facilitated by three foreign specialists who were hired by PENMAS and UMass as part of their contract to provide technical assistance. They were to serve as resource persons to the six IKIPs while the eighteen MA candidates from the IKIPs were studying at UMass. The workshop approach seemed the best means to utilize the skills of these resource persons for the in-service training of IKIP staff.

Two workshops, in particular, aided the development of the D1 diploma course at the IKIPs. The first concerned the planning and the writing of unit lessons; the second concerned the writing and the teaching of nonformal education teaching and learning activities.

This first workshop was conducted in two stages. During the first stage one representative from each of the six IKIPs joined the three specialists in a working session about the process of program planning. This became a training workshop in preparation for the second stage of workshops. The second stage was to be conducted at each IKIP by each head trainer—the staff person who had participated in the first stage—and the three specialists. The second stage of workshops concentrated on planning, specifically on planning and writing unit lesson plans for the D1 program.

During the first stage, the six representatives participated in a simulation game about participatory planning. They were divided into three groups with similar instructions: to design a curriculum for a short course in typing. However, each group had different opportunities to interview different representatives from the community such as former typing students, business people, school administrators. Other participants role played representatives from the community. Group one interviewed community members representative of all three categories. Group two interviewed representatives from two categories. Group three had no information from the community. The most detailed plan came from the group that had the opportunity to interview people representative of all three categories from the community and, therefore, had done the most thorough needs assessment. The group with the poorest curriculum plan felt cheated since they had not had the opportunity to do any interviews. This simulation was subsequently tried out at the IKIPs with the D1 students. They also felt this teaching strategy was a beneficial way of introducing the importance of participation and assessing community needs as part of program planning.

The second stage of these workshops took place at each of the six IKIPs. The major goal of these workshops was to practice curriculum planning, i.e., writing general and specific objectives, designing learning activities and evaluation procedures for the competency-based, nonformal education D1 curriculum. While the enthusiasm for these workshops was high, the writing of behavioral objectives became a rather tedious affair. During these workshops the staff decided to write unit lesson plans rather than specific plans for each class period. The IKIP staff were not yet that familiar with the specific educational needs of nonformal education fieldworkers.

The second workshop was essentially a teacher training workshop involving both IKIP and provincial level, Balai PENMAS staff.

Two returned MA candidates and one specialist planned this workshop with the aid and input of personnel from both institutions. The IKIP and Balai PENMAS staff from Medan together with the head trainers identified problems significant to both the pre-service and the in-service training programs. From this list of problems, they selected learning activities that would elicit and help solve these problems. The trainers then wrote out examples of how to develop these problem-solving activities.

During the workshop participants divided into groups of two, one IKIP staff person with one Balai PENMAS staff person. Each group chose a problem and a learning activity. The goal was for each group to write out one activity, teach it, and lead a discussion evaluating the activity.

PENMAS and IKIP staff in Medan doing role play

From the point of view of the IKIP staff, those who had to teach the pre-service curriculum were most in need of nonformal education teaching methods and materials. In-class practicum was a required part of the "new" curriculum so the staff appreciated this workshop. Some stated that they needed more workshops or working sessions like it and wished that it was the first rather than the last workshop in the series.

Nonformal Education Research and Resource Materials

The third critical question was: How to design and implement nonformal education research for the benefit of the staff, the students, and the community?

A substantial portion of the budget was allocated for nonformal education research. Each of the IKIPs chose research projects that matched their expertise and needs. One IKIP developed a participatory research design to investigate participation as a motivational device for community development programs. Another developed a photonovela or a problem-solving learning material developed from the words and pictures of rural people. A third compared participatory literacy education methods and a traditional literacy approach during a three-month literacy project. A fourth IKIP tried to determine women's motivation to read based on interviews with women in the marketplace.

More than other features of the program, the research component introduced the IKIP staff to the community in a tangible way. After participating in the literacy project and spending three weeks in a rural community, one IKIP staff member commented, "Fifteen years ago Indonesia was claimed to be free of illiteracy. Now we have 30 percent illiteracy. I think we've lost touch with many of the rural people."

At a workshop session on participatory learning and teaching methods for the IKIP staff members, there were some staff who participated in the nonformal education research project and some who did not. One staff member who did not remarked, "People are too stupid to be able to participate." Another who also had not participated in the research project commented, "Participation will lead to chaos. No one will be able to control 'them' if 'they' participate." Two staff members who had participated in the nonformal education research project strongly disagreed and stressed that the best facilitators of literacy groups encouraged participation and spoke to the adult learners with respect, whereas, the poorest facilitators were authoritative and did not encourage discussion and participation.

Both in spirit and in action, the research project inspired a few IKIP staff members. One of the most energetic IKIP teachers started a literacy learning group in his neighborhood utilizing different literacy methods and materials.

The IKIP staff felt particularly at a loss due to the absence of resource materials about nonformal education. Although there were funds for materials development, many of the books supplied were in English and inappropriate in language and content to staff needs. The first two years were spent writing reports on workshop results, case studies from the research, bulletins from lectures, and some manuals. Much more needs to be done in this area to satisfy the adademic needs of the IKIP staff.

Conclusion

Within the IKIP, the process of integrating a nonformal education curriculum into a formal education institution took specific shape through the field practicum, the staff development workshops, research projects, and the initiative of individual staff members. The success of this program and the collaboration between PENMAS and the IKIPs will depend on the ability of the program to change the IKIP staff's teaching methods and their attitudes toward community education; the ability of the program to encourage and sustain institutional and community support; and the ability of the program to be flexible and adapt to community needs.

In one instance a teacher at the IKIP wrote out a role play about group dynamics where students in small groups acted out and evaluated different styles of leadership, e.g., authoritative, democratic, laissez-faire. Other staff members observed this role play and commented on its effectiveness as a teaching method. This demonstration encouraged other staff members to try problem-solving learning activities in their classes.

The process of developing a nonformal education program within a formal education institution required funding and administrative support from an outside agency, PENMAS. In turn, PENMAS has faced problems in developing a cadre of trained personnel to coordinate field-based programs. The collaboration of these two institutions will serve to strengthen both of them.

In the future, the curriculum at the IKIPs will include the development of nonformal education courses for the private sector. The structure of the diploma program will be expanded so that graduates of the one-year course, after working in the field for a number of years, will be able to return to the IKIPs for one or more years of additional in-service training. This mixture of field experience and academic study will result in the continuous upgrading of nonformal

ducation personnel. In addition, it will add credibility, incentives, and institutional support for nonformal educators working in the field.

The institutional cooperation between PENMAS and the IKIPs, as well as internal development within the IKIPs to support nonformal education, lend a degree of stability, standardization, and uniformity to this program.

Effective nonformal education programs must also have the ability to adapt to regional and cultural differences as well as the specific socio-economic needs of a local community. In particular, the participation of Indonesia's multicultural communities presupposes a nonformal education program that combines uniformity with flexibility and merges far-reaching national goals with immediate practical objectives which meet local community needs. If the people cannot find or bring meaning to these programs, if they cannot gain power through them, then these programs as community education programs will fail. One IKIP staff member stated that he thought maybe Indonesia needed more of the pragmatism of the West to help solve their development problems. But he qualified this thought with the statement, "But this pragmatism will be and must be tempered with our knowledge of what we need and our own morality, our own spirit."

TRAINING AT THE UNIVERSITY OF MASSACHUSETTS

GUIDING PRINCIPLES

IKIP Degree Training

1. Degree level training should be viewed as a long-term manpower development strategy keyed to future PENMAS needs. Teacher trainer degree programs should prepare participants to act as consultants to PENMAS directly, and to develop curriculum and programs in their IKIPs for the training of students in nonformal education philosophy, methodology, and skills.
2. Degree level training should include both theory and practice of nonformal education. Academic programs should integrate formal classwork with internships and study visits in nonformal education projects—locally and throughout the U.S. and Asia.
3. Degree level training should include opportunities to focus on the specific needs of PENMAS and Indonesia. Linkages with on-going field operations may take the form of independent studies of current issues, work with short-term training of PENMAS staff in the U.S. and special courses designed for IKIP participants focused on these needs.

Participant training in development programs has an uneven record. Overseas fellowships have been criticized in the past as often irrelevant to developing country needs, inefficient and too expensive, and likely to result in a cadre of desk-bound experts who have little impact on the real needs of education and development programs. PENMAS and UMass recognized these hazards at the outset of the Nonformal Education Project and together systematically designed

an integrated fellowship program that would meet the specific needs of PENMAS. These can be summarized as follows:

1. To provide graduate level degree training for faculty of key teacher training institutions to prepare them to develop curriculum for and train students in nonformal education to meet the long-term manpower needs of PENMAS and to act as domestic consultants to PENMAS programs.
2. To provide non-degree training for PENMAS staff in areas of nonformal education identified as a high priority for the project's development and maintenance.
3. To integrate degree and non-degree training with technical assistance in Indonesia and to link both with other project activities in response to changing needs.

The result was an innovative design for participant training, made possible, in part, by the number and types of resources available under this project. The large-scale nature of the project was strongly in its favor, making possible communications, groupings, and economies of size that would be impossible to duplicate in a smaller effort. During the project, 20 IKIP faculty members received graduate level training in nonformal education curriculum development, training, and evaluation. One member of the PENMAS staff received advanced level, long-term training in communications and 44 PENMAS national and regional staff received short-term, non-degree training in job-related nonformal education areas. Both long-term and short-term programs are discussed in more detail below.

IKIP DEGREE TRAINING

An unusual aspect of initial project plans was the inclusion of six IKIPs, corresponding to the six regions of the project's operation, in the long-term PENMAS development strategy. Clearly, a project of this size and scope would call for a continuous supply of personnel with training in nonformal education for roles as fieldworkers, district and regional staff. Such extensive manpower needs are best met on a regional basis by using the resources of existing education and training institutions. The IKIPs, already involved in varying degrees with community and social education, were a logical choice. The project assisted the IKIPs in building their nonformal education capacity with a two-pronged approach: providing assistance in curriculum development (described elsewhere in this report) and offering fellowships to three faculty from each IKIP for long-term M.Ed.

degree training in the United States. In each case the three individuals would then return to their IKIPs to continue the development of NFE curricula and programs and to serve as resources for the PENMAS regional operations.

Participant Selection and Placement

Early discussions between PENMAS and UMass dealt with the general criteria for selection of fellowship candidates. It was felt that they should have demonstrated an interest in nonformal education through involvement in community education and non-traditional education activities, be active teachers and researchers with a potential for leadership, and meet academic requirements for acceptance in degree programs, including a satisfactory knowledge of English to allow them to study successfully at an English-speaking university. Each IKIP nominated six candidates. PENMAS then participated in the selection of the final three candidates.

The nomination and selection process differed considerably from IKIP to IKIP, depending upon the degree to which those involved understood the requirements and goals of the project. A major factor was the restriction in time; all 18 candidates (three from six IKIPs) were to begin their program in November, 1978, allowing little opportunity for either a longer selection process or for intensive English language training of final candidates. The result was that while most candidates met the criteria of nonformal education and potential leadership, few were able to qualify immediately in the English language. Passing the standard English language examination (TOEFL) became a critical element, since all U.S. universities require a score of 500 or better to qualify for a degree program.

Simultaneous with the candidate selection process, plans were made for placement of participants in academic programs. Consideration was given to placement in several different universities, but PENMAS and UMass agreed that by concentrating all of them at UMass, the participants would benefit from the special efforts of on-campus project staff in support and administration, from university-wide coordination of resources and from the creation of new courses or revision of existing courses to meet the needs of both the participants and PENMAS. Diversity of experience and perspective could be incorporated by internships and study visits at other institutions during their course of study.

Orientation and English Language Training

IKIP participants arrived in November at UMass to begin a two-month special orientation and language training program before officially enrolling in the academic semester which began at the end of January, 1979. Language and orientation were integrated throughout and included four to six hours of English instruction every day, an introductory seminar on the history and theory of nonformal education and "survival skills," involving everything from coin-operated laundries and preparing for winter weather to library tours and course scheduling for the next semester.

During this period, most participants lived with UMass area families, gaining further insight into U.S. culture and society and often forming friendships that would last throughout their studies and beyond. UMass arranged these extended family stays to ensure that all participants would have something other than the dormitory experience of most foreign students and to try to ensure that language practice would not stop at the end of the English language classes. For a few participants, however, the demands of a new university, anxiety over the TOEFL and coping with a new family were too complicated and too heavy; arrangements were made to move them to other housing. As planned, all participants moved to university housing at the beginning of the new semester.

Academic Programming, Internships and Study Tours

The academic programming for IKIP participants was first designed to meet three separate but complementary needs:

1. to provide individualized programs for each participant that responded to their experience and interests;
2. to provide a program that would form the basis for each IKIP's development in nonformal education training, curriculum development and evaluation; and
3. to provide a comprehensive program in nonformal education that would contribute to the current and future development of PENMAS.

Experience in the first two months of orientation added a fourth priority that inevitably dominated other program elements:

4. to provide every opportunity and all possible support to ensure that participants met TOEFL requirements for degree programs.

Before the IKIP participants arrived, an Advisory Committee was formed at UMass consisting of on-campus project staff, UMass faculty advisors selected to work with IKIP participants, and other university personnel with experience and interest in Indonesia. This group met regularly to plan the academic program, review progress and share ideas and resources. In several instances, UMass faculty and staff on the Advisory Committee were also host families to participants.

Participants met with their faculty advisors to plan their academic programs. It was understood that each of the three-person IKIP teams had been divided so that one person would specialize in training, another in curriculum development, and the third in evaluation. All should receive instruction in the history, basic principles and issues of nonformal education. Thus, each team would return to their IKIP with a shared general background as well as individual expertise for a combined effort in NFE development and training. The result was that all participants took one course together each semester, while other courses were selected by individual specialties and interests. Typical courses in which participants enrolled were:

- Training for Nonformal Education
- Curriculum Development for Adult and Nonformal Education
- Evaluation in Nonformal Education
- Materials Development in Nonformal Education
- Developing Skills in Nonformal Education
- Nonformal Education Project Management
- Games and Simulations for Nonformal Education
- Research Methodology in International Education
- Education and Development

In addition, participants enrolled in other School of Education courses related to their future job responsibilities: Community Education, Staff Development, Vocational Education, etc. They were strongly encouraged to take a few courses outside the School in such areas as business, sociology, and rural development, but this depended upon individual interests and schedules. All UMass M.Ed. graduates also wrote a terminal paper dealing with some aspect of nonformal education in Indonesia.

However, this academic programming progressed along with, and in spite of, the all-pervasive fourth need: to qualify for a degree

program via the TOEFL examination. By February, 1979, only two participants had officially qualified and the IKIP program was revised to include additional English language training throughout the Spring Semester. More qualified by June, and the remainder were placed in intensive language programs for the summer at Boston University, SUNY Buffalo and Georgetown University. By September, 1979, nine had qualified and were officially accepted into the UMass M.Ed. program but nine still were below the 500 level. Later, five of these were accepted into a Master's program at Springfield College, which is near UMass and has a history of cooperation with UMass. The other four returned to Indonesia later that fall, regrettably without an advanced degree. Their studies appear to have been of long-term benefit, however, since they continue to apply their experience in nonformal education in their IKIPs and to work with the national and regional programs of PENMAS.

Two additional IKIP faculty members joined the fellowship program in January, 1981, representing two IKIPs not previously included in the project. Both were able to complete their M.Ed. degrees at UMass by December, 1981.

As an integral part of this long-term training for all IKIP participants, internships and study tours were arranged for vacation periods, intersession, summer months, and during the return trip to Indonesia. During short vacations and intersessions, participants visited other universities, attended workshops and conferences, and pursued individual research. During the summer period, internships were established with nonformal education organizations and institutions in which participants could study and work in on-going NFE programs. Participant internships ranged from work in the national association of credit unions and cooperatives to an adult education and income generation program in North Carolina; from community development in rural Canada to training for citizen action in western Massachusetts.

The most important internships in terms of direct integration of various PENMAS project elements were those served by IKIP participants who acted as co-trainers for the short-term, non-degree training programs for PENMAS staff during the summers of 1979 and 1980. IKIP participants worked as part of the UMass training team, sharing responsibility for design, implementation and evaluation of PENMAS staff training in materials development, training, program

planning and evaluation. These internships gave the IKIP participants direct, supervised experience in all phases of nonformal education training and also placed them in their role as resources to PENMAS staff—a role which they were expected to continue in the project. PENMAS staff became acquainted with the IKIP participants and their abilities in NFE training; together they worked on issues and problems of current importance in the project. Thus, the summer training programs became a means of strengthening the linkage between PENMAS and the IKIPs, of enriching the studies of the IKIP participants through involvement with immediate, direct NFE program issues, and of providing bi-lingual, Indonesian nonformal education trainers for the training program.

IKIP co-trainer facilitating training activity for PENMAS provincial staff training at UMass

Finally, all IKIP participants had the opportunity to visit nonformal education programs in Asia during their return trips to Indonesia. Study visits were arranged in Thailand, Malaysia and the Philippines at a variety of adult and community education projects.

Recommendations for Overseas Degree Programs

Several observations can be made based on the IKIP program that could be useful to educational institutions and others involved in overseas degree training. First, language requirements should be a subject of detailed planning and mutual agreement during initial program design. Fulfilling language requirements may mean alloca-

tion of additional time and finances to provide intensive language training to potential candidates. Wherever possible, candidates should fulfill this language requirement while still in their own country, thus avoiding the situation in which students already in the U.S. must cope with the pressures and anxieties of language qualifications before starting their degree programs. Experience has shown that when students are uncertain about meeting language requirements, or must return to their own countries without qualifying for a degree program, both personal esteem and program morale suffer and program funds are lost that might have been used to support other candidates.

Second, grouping participants at one institution has the advantage of providing more focused support and special programming, but also produces a tendency for participants to mix less with others in the university community. Participants who are less assertive and less socially at ease may retire within their own group, thus limiting their opportunity to increase language skills and to gain from association with other international and American students. Conscious and continued efforts must be made by program staff to structure opportunities for such interaction and to encourage participants to take advantage of them.

Lastly, it should be recognized that candidates entering a field of study new to them for a Master's degree will have to focus intensively on that field and will have limited opportunities to explore the larger academic resources of the university. A Master's program which lasts for a year or eighteen months is a relatively short period of time. If participants have had little experience or previous academic background in the area of study they will need courses in basic foundations and philosophy as well as in specific approaches and methods; internships and independent studies will also focus on their defined field. This type of structured program will fulfill the needs of the sponsoring agency, but may not satisfy the desires of participants to sample other areas of study. This issue should be discussed and clarified among the participants, the sponsoring agency, and the educational institution as part of the recruitment and selection process.

Integration with PENMAS: The "Ex-UMass"

The consistent effort to tie the fellowship program to the PENMAS project resulted in a reality-based graduate program and

strengthened the basis for further cooperation between PENMAS and the IKIPs. The longer-term effects appear to have justified the effort, at times in unanticipated ways. IKIP participants have returned to their institutions to assist in the creation of NFE curriculum and materials. In their teaching, they are experimenting with participative techniques and learner-centered methods, setting an example for other IKIP faculty. They have pressed for a more extensive field practicum for IKIP students and some have adapted PENMAS learning materials for use by their students during their village fieldwork.

IKIP degree participants and PENMAS staff from management training seminars

For PENMAS, they act as consultants in research, training and materials development, their specific roles differing from region to region. The IKIP participants identify themselves and are identified by PENMAS as the "Ex-UMass." There is a feeling of pride and a spirit of camaraderie in the designation based on shared experience and commitment to common goals. Regionally and nationally, the Ex-UMass continue to work together for and with PENMAS in building the capacity of that institution as well as that of the IKIPs to provide effective programs and manpower development in nonformal education.

GUIDING PRINCIPLES

The Design and Implementation of Needs-Based Training for Administrators of Large-Scale Nonformal Education Programs

1. Learner participation in decision making during program design, implementation, and evaluation is important to ensure the selection of relevant content and appropriate learning approaches, to help the training team and participants develop an understanding of each others' perspectives, and to generally make better decisions.
2. Adult learners, inclusive of administrators of programs, learn best when staff development efforts are responsive to their needs for personal growth and fulfillment. Thus, when developing programs to respond to participants' needs, trainers need to consider the following:
   a. View the needs assessment process as on-going.
   b. Include participants in the planning process.
   c. Help participants assess new ideas and techniques in terms of their cultural appropriateness and applicability to their work situation and local conditions.
   d. Consider ways to develop teamwork among the participants so that they have a support system to help them meet their own needs after training.
3. The training staff must model behaviors which reflect the philosophy of nonformal education during training. Learning from appropriate role models is a very influential way to learn. The relationship of the training staff to the participants should be one of mutual respect, directly mirroring the desired relationship between fieldworkers and their learning group members.

NON-DEGREE TRAINING

> That's the way it was. We always participated in everything. We solved everything together at Friday meetings. We participated in setting goals and objectives. Whenever problems came up even in training activities, we always got encouragement and guidance.
>
> A Materials Development Specialist

The above quote is a translated response from a taped evaluation session of one of the materials development specialists at the end of their 5-month training program. In a group evaluation activity, the materials development specialists were given 14 characteristics that described trainers and trainees in either traditional or participative roles and were asked to select those characteristics which best described their trainers. In the above quote, the materials development specialist elaborated why he had selected characteristic #3: "The trainer encourages trainees to participate in identifying objectives and content for programs and includes them in problem solving activities." The concept of participative decision making was a major theme in all non-degree training programs conducted at UMass for PENMAS staff.

> Learner participation in decision making during program design, implementation and evaluation is important.

Recent research on adult learning and nonformal education shows that adults learn best when programs are responsive to their needs for personal growth and fulfillment. Thus, one of the assumptions regarding training design at the Center for International Education is that a training program is more effective when it responds to the needs of the learner than when it does not. To respond to learners' needs, it is critical to involve them in decisions that affect them.

The World Bank's appraisal document for the project,[1] indicated that two areas of weakness of PENMAS programs were: (1) inadequate training of nonformal educators and (2) overly centralized programming which does not allow PENMAS programs to

1. Education Projects Division. *Indonesia: Appraisal of a Non-Formal Education Project.* Washington, D.C.: World Bank, August 19, 1977. Report No. 16066-IND, p. 4.

respond flexibly to local learning needs. To respond to these needs of PENMAS, during the training design, the staff were concerned with two sets of issues: first, the modelling of important concepts relevant to training nonformal educators such as adapting materials to the local situation (Indonesia), utilizing learners as important resources in defining their own learning needs, serving as facilitators of experiences rather than as the ones who know everything, and creating a climate of mutual respect between trainees and trainers; and second, using a variety of participative strategies and techniques in program design, implementation and evaluation so that, as adult learners in their own training, the PENMAS staff could learn experientially how to be responsive to learners' needs.

Program Participants and Training Content

The non-degree training component of the project consisted of five staff development programs designed specifically to address the varied needs of PENMAS staff members from the national and regional levels, and the organizational needs of PENMAS within the context of Indonesia. These programs are briefly explained below.

Management Training Seminar. The program participants were managers in charge of PENMAS operations in 6 provinces, the head of the training and materials development center in Jayagiri and the Chief of Technical Assistance for the PIU (Project Implementation Unit).

The program integrated 3 content areas: modern management practices for large-scale nonformal education programs and participative management theory; nonformal education methodologies in materials development, training design, evaluation, and curriculum development; and community (village level) participation in program development.

Training Program for Balai PENMAS Staff: Materials Developers, Trainers and Program Planners. Program participants were nineteen provincial and two national level administrators in charge of PENMAS operations for materials development, training design, and program planning from a total of six project provinces and the PIU.

Their training was divided into two phases. The first phase focused on training design, implementation, and evaluation of penilik training since all staff have responsibility for training. For the second phase, the group was divided into three job task groups:

trainers designed and tried out a variety of training techniques, program planners analyzed revolving learning fund pilot projects and made recommendations in a report, and the materials developers discussed a basic model for materials production and went through each of the steps in an experiential exercise.

Extended Training for Materials Development. Following their joint training program described above, the materials developers continued their training for an additional three months in instructional systems design and development, evaluation of learning materials and feedback on materials developed at the Balai PENMAS, skill development in slide and tape production, and management of the production and distribution of learning materials.

Evaluation Training Program. Program participants were six regional administrators and one national level PENMAS staff member in charge of evaluation activities and one evaluator researcher from BP3K (Office of the Educational and Cultural Research and Development of the Ministry of Education and Culture).

Their program included content areas such as examination of several evaluation approaches as models suitable for evaluating large-scale nonformal education programs; analysis of current evaluation approaches of PENMAS; design of evaluation activities; and training program evaluation.

Educational Media for Nonformal Education. This twelve-week program was designed and implemented by INNOTECH, the Regional Center for Educational Innovation and Technology in the Philippines, for six provincial audiovisual specialists. A modular approach to training was utilized that combined self-instructional modules with lecture, discussion, demonstrations and practicums.

Major topic areas included: systems approach to NFE; introduction to educational media and the communication process; radio and audio recordings for NFE; photography; studio production (practical for audio recording); maintenance and operation of equipment. Participants also visited rural and urban nonformal education programs and observed, in some visits, learning materials being produced.

Training Design and Strategies

Generally the programs conducted at the Center for International Education combined classroom sessions with study visits

requested by PENMAS to nonformal education programs in the United States, Canada, Europe, and Asia. The total length of time for each program was 2 months with the exception of the materials development program that lasted 5 months.

With variations in numbers of program participants, length of training time and participant job responsibilities, the training coordinators were faced with two important questions relating to the *how* and *what* of training.

How do we design training programs responsive to: the individual needs of PENMAS staff members, the organizational needs of PENMAS, regional differences and local conditions, and Indonesian cultural values?

What, in a short term training program, should be given priority: the learning of information, practicing skills or affective development?

Part of the response to these questions, as mentioned previously, was learner participation in decision making, i.e., asking the participants and PENMAS officials. This gave rise to a third question:

How and when can PENMAS administrators be involved in the decision making process considering the major constraints involved with long distance communication and relatively short (two months) training periods for most of the program participants?

Reflecting upon this experience with non-degree training, there appear to be several critical areas that helped to make training an effective, short-term intervention strategy for upgrading the skills of PENMAS administrators. Four critical areas, Needs Assessment, Participants as Planners, Cultural Relativity, and Team Building, are described below with examples.

> Needs Assessment: trainers should view the needs assessment process as on-going.

Training staff conducted two levels of assessment for each training program. The first level needs assessment involved a general assessment of available information on PENMAS, the participants' jobs, and specific programming requests from PENMAS. This was done early in the planning stage and was the basis for writing goals and objectives which were sent to PENMAS for feedback and ap-

proval. Thus, final decisions regarding program goals and objectives were made by PENMAS officials in Jakarta.

The second level needs assessment focused on the specific learning needs of the participants as individuals and as a group. Shortly after the arrival of participants in Amherst and prior to the start of their training, the trainers interviewed the participants individually and discussed with them their expectations of training, previous training experiences, and problems currently faced on the job. This information provided input to the trainers regarding content focus and training techniques for designing future sessions.

Midway through the program, an additional needs assessment was conducted to assess the needs which had been met and to prioritize the needs for the second half of the program. This information provided trainers with a basis for designing activities that would help participants meet their most pressing needs in the remaining time. At the end of the training, during the final evaluation session, participants were again asked to assess their needs to determine what needs were met during training and what needs could be the focus of future staff development efforts.

The extended training for Materials Developers was a program that digressed from this pattern. In that program, the participants assessed their own needs, discussed them with the trainers and, then, based on their needs, wrote their own goals and objectives to present for discussion with the trainers on how to meet them.

> Participants as Planners: trainers should include participants in the planning process.

Techniques to involve the participants in the planning process depended upon the nature of the specific program. For example, for the Management Training Seminar, a series of workshops were implemented based on the needs of the managers. To increase the effectiveness of these workshops, the participants planned sessions jointly with the trainers.

The approach for the Training Program for Balai PENMAS Staff utilized co-training teams made up of one member from the IKIP degree program and one other CIE trainer. The co-trainers, on a weekly basis, planned and conducted most of the sessions during the first half of the training. Then, for the second half, the partici-

pants were divided according to job title. Each group worked specifically with one co-training team to design specific activities to meet the individual group needs.

The Extended Training Program for Materials Developers was conducted on the basis that participants and trainers were one planning team. The participants identified their needs, the facilitators described the available resources, and the participants decided what they wanted. This was possible because the participants and trainers had an established relationship, the participants were familiar with their environment and there was ample time for team planning.

The Evaluation Training Program used an approach similar to the Training Program for Balai PENMAS Staff with co-training teams; each team included one member from either the IKIP degree program or a member from the PIU. In this program the participants had input into the decision-making process on a week to week basis and made decisions regarding content emphasis, scheduling, length of time for special job-related tasks, and selection of consultants to assist them with their tasks.

> Cultural Relevancy: trainers should help participants assess new ideas and techniques in terms of their cultural appropriateness and applicability to their home regions.

A key to assisting the participants in discussing new ideas and techniques was language. Because many of the participants were not fluent in English, the trainers felt that, when possible, the sessions should be conducted to Bahasa Indonesia, the national language of Indonesia. The degree to which Bahasa Indonesia was spoken depended on the language resources available. For the management training, much of the information was delivered in English with translation into Bahasa Indonesia and, then, if necessary, questions were translated to the trainers in English for the trainers' opinion.

With both the Training Program for Balai PENMAS Staff and the Evaluation Training Program using co-training teams with an Indonesian member, most of the sessions were conducted in Bahasa Indonesia unless there were special sessions given by presenters other than the trainers.

The Extended Training for Materials Developers was conducted in English with the materials developers themselves handling transla-

tion into Bahasa Indonesia as needed, for they had received a three-week intensive English language course between programs.

Materials Developers and facilitators during training session learning how to use video tapes

With significant amounts of time devoted to discussion in Bahasa Indonesia, participants had the opportunity not only to receive the information in their own language, but also the opportunity to discuss and clarify the information in small groups. Thus, participants often engaged in peer learning and served as valuable resources to each other by offering explanations and giving examples from the Indonesian context. Most of the reading materials were also translated into Bahasa Indonesia.

> Team Building: trainers should consider ways to develop teamwork among the participants so that they have a support system to help them meet their needs after training.

Within each training program, teamwork was encouraged by using participatory training techniques that included small group discussion, role play, simulations, critical incidents, hypotheticals, and developing project plans for use when participants returned to Indonesia. Most of the training efforts were directed to identification and problem analysis of various aspects of the PENMAS organizational system and exploration of possible solutions appropriate for the conditions in Indonesia.

Additionally, the programs were implemented to overlap with the IKIP degree program so that participants from both programs could participate in joint training sessions and meetings, thereby increasing the understanding among project participants of their respective roles in nonformal education in Indonesia and initiating the development of working relationships between the two groups for future work efforts.

Evaluation of Non-Degree Training

A critical component for program effectiveness is responding to learners' needs. In planning the non-degree training component, the training coordinators tried to design programs that would respond to individual or group needs as well as the organizational needs of PENMAS. Training staff accomplished this by responding to specific programming requests, by seeking approval and feedback on goals and objectives, conducting on-going needs assessments, by utilizing feedback from each training program as input to the planning process for the next program, by involving the participants in various aspects of planning and implementing their own training sessions, by addressing cultural relevance through conducting sessions in Bahasa Indonesia and translation of materials, and by developing teamwork by using participatory training techniques.

After reviewing this participative, needs-based approach to training, two basic questions emerge from the perspective of the participants:

Did the training program meet my needs?

What did I do differently after I had returned to my job in Indonesia?

At the end of each training program, summative evaluation sessions were conducted during which the participants could evaluate several aspects of their training program. Some of the techniques allowed for group discussion while others were individual and confidential. Generally across programs, the participants felt that at the end of training a majority of their expectations were met and that the program was responsive to their needs even though as one participant reminded us, that "... of course it is impossible for the CIE to provide all of our needs in a very short time."

TABLE 6

PARTICIPANTS' EVALUATION BY PROGRAM

Program	% of Objectives Met As Assessed by Participants
Management Training	2/3 of the participants met 80% of the objectives 1/3 of the participants met 100% of the objectives
Training for Balai PENMAS Staff	85% of the Trainers and Program Planners met above 80% of the objectives
Training for Evaluators	at least 2/3 of the participants met 83% of the objectives at a 75% or 100% level

In the Extended Training for Materials Developers, 85% of the participants met their objectives for these content areas—managing their learning materials staff, defining learning materials, learning about innovative materials, producing learning materials, and testing learning materials; whereas, 85% of the participants did not meet their objectives for these content areas—technical writing of learning materials, how to translate an idea into a product, development of personal skills.

The post training evaluation conducted at INNOTECH for the audio-visual specialists reported the following results:

1. All participants responded that they had mastered the great majority of instructional objectives very well.
2. A small number of instructional objectives were mastered by three participants "well enough" and two objectives were learned just "a little" by two participants.
3. All participants considered all of the instructional objectives "very useful" to their work.

A follow-up evaluation was conducted approximately one year after the participants had returned to Indonesia. The participants received a questionnaire that asked them questions regarding the content of their training, what was most useful, what had they tried to apply, and what was their impression of training after returning to their jobs? Participants from the Management Training Seminar and the Training Program for Materials Developers, Trainers and Program Planners received forms. Almost half (12 out of 28) of the participants returned these forms. At this point in the project the

evaluators had not had their training; thus, their opinions and those of the audio-visual specialists are not included in the summary below.

All the participants that returned the questionnaire rated the content coverage of their program as adequate or above as shown in Table 7.

TABLE 7

COMPILED PARTICIPANT RESPONSES TO CONTENT COVERAGE

not adequate				**very adequate**
1	2	3	4	5
0%	0%	25%	66%	8%

Given the above ratings, no participants felt that their training program was too long, although nearly equal numbers of participants thought their program was too short (41%) or enough time (58%). However, whether the program was viewed as too short or as sufficient, many of the participants were able to learn new concepts or skills or develop ones they had. As one participant wrote, "In my opinion, the most important thing is how to apply theory in practice." Thus, the following quotes extracted from the questionnaires should give the reader an indication of the kinds of things the participants learned, tried to use and, therefore, what they felt was most helpful or adaptable to their specific situation in Indonesia.

Following are representative responses to the questions: "When you returned to Indonesia, what did you try differently?" and "Has there been a change in teamwork in your work setting, and if so, what?"

- "My attitude changed toward participative leadership. I developed training programs for supervisors and staff and tried to encourage my subordinates to create or initiate something new."
- "To use my time more efficiently."
- "Training design and participative training techniques."
- "Develop instrument to test learning facilities."

- "To motivate citizens how important nonformal education is to improving their quality of life. The number of learners in my province is increasing."
- "Since I have adopted them (participative management and training), my subordinates become more enthusiastic."
- "Teamwork has changed because everyone understands job description."
- "To coordinate training preparation and their implementation."
- "Teamwork has changed in problem solving and designing programs."
- "Yes, in management and teamwork in any of intersectoral activities."
- "Yes, because teamworkers need individual responsibility, shared responsibility and cooperative responsibility."

In addition to the participants' perspective of their training, the expatriate specialists in Indonesia, approximately one year after participants had returned from training (Evaluators and Audio-Visual Specialists training not included), were asked to discuss what changes they perceived as having occurred in the participants as a result of their training. In a taped discussion, the specialists shared their observations and felt the most beneficial outcomes of the training were as follows:

1. The participants had a common experience which created a feeling of camaraderie when they returned to their jobs. This led to the development of a support system for trying new ideas on the job.
2. The participants learned a common vocabulary which established a base from which to communicate their ideas to other PENMAS staff as well as to develop relationships with the specialists, thereby being able to use them more effectively.
3. Prior to their training, the participants did not know what nonformal education was and, therefore, were unsure about their jobs. Following training nearly all participants' self-confidence increased and they were able to perform their jobs better because "they knew what they were supposed to do."
4. Every participant was affected by the training; however, the most impact was seen in the way training was conducted. The specialists attributed this to the participants' learning through the direct modelling of their training experience. One special-

ist said, "Their training made a complete turn around, from 100% lectures to 50% participatory."

From many perspectives— participants, specialists and trainers, the overall development training for PENMAS staff was successful in achieving a majority of its goals and objectives; however, there were some problems. In retrospect, the final training program for PENMAS evaluators was the most difficult one to design and implement. The trainers attributed this difficulty, for the most part, to three major constraints: lack of clearly defined job descriptions, varied skill and knowledge levels of evaluation of program participants, and varied English language capabilities.

These constraints were not easily resolved. They could be the underlying reasons why the evaluation group did not develop the teamwork spirit and cohesiveness as much as previous groups and why the trainers had difficulty in designing and implementing a program based on participants' needs. The positive and constraining factors in any given training program are important to consider, for they influence the usefulness of training and what participants are able to do after their return to their jobs.

A fitting comment to close this section was made by a participant at the end of a conversation about interpersonal relationships, facilitative styles in teaching and management, and participative approaches:

"This is what nonformal education is all about."

MATERIALS DEVELOPMENT SYSTEM

GUIDING PRINCIPLES

Designing Large-Scale Materials Development Systems that are Responsive to National and Local Goals

1. A centrally planned materials development system should be designed with flexibility so that learning materials can be produced to serve both national and community interests.
2. Steps in developing learning materials, either at national, regional, or local levels, need to include field testing activities so that feedback can be used to revise materials before they are produced on a large scale.
3. If learning materials, such as literacy booklets, are developed and produced at the national level for countrywide distribution, then supplemental materials should also be developed at the local level that relate to the specific learning needs of a particular population.
4. When developing and producing materials at the national level for use at local levels, designers need to gain the cooperation of district staff who will support programs and fieldworkers who will use the materials. Involving personnel at various organizational levels ensures communication between the levels of the organization regarding prospective development plans and activities. With the participation of administrators and fieldworkers, the designers will most likely succeed with less resistance when new ideas are introduced.
5. The people who manage a materials development system must be flexible, adaptive, and creative if they are to meet the divergent needs of different organizational levels and local learners.

A roadmap does not explain a country nor give a sense of its landscape or people, but it does help a traveler get from place to place. Likewise, a description of the materials development system for PENMAS will not explain the component, its products, problems, or procedures, but the description can provide an observer with a sketch of the terrain and can suggest the magnitude and complexity of the undertaking.

This chapter does not attempt to present a comprehensive picture of all the materials development activities which have taken place under this project. Like the other major project components (training, evaluation, program planning, etc.), a thorough description of the PENMAS materials development activities would fill a separate publication. Rather, this chapter presents an overview of the elaborate materials development system eventually put in place by PENMAS. Only a few issues and innovations are analyzed. Only a handful of materials are discussed. Because of the nature of this publication, the work of only a few of the more than one hundred professionals who labored to create, manage and utilize this system over a four-year period is reported on. Particular attention is paid to materials development areas in which the three foreign specialists provided advice and assistance over the past few years.

Goals and Progress

An observer considering the PENMAS materials development component at the end of 1981 is presented with a system of bewildering complexity. There is an array of seemingly unintegrated activities, plans, products, and programs carried out at various organizational levels. To the observer the goal of the enterprise, to provide hundreds of informative, attractive learning materials to tens of thousands of learners each year, may seem awesome in the scale of its intentions.

If the observer had seen the PENMAS project a few years ago, he or she would have wondered even further at the audacity of this goal. At that time PENMAS had a scant handful of trained or experienced materials personnel at the national level and none at other organizational levels. At that time PENMAS had only one limited capacity materials production facility, had no system for widespread testing, production and distribution of its own learning materials, had no standard curriculum for many of its programs, and had no systematic plan for coordinating the content, production, distribution and utilization of scores of materials each year. Yet in

just a few years PENMAS is extraordinarily close to meeting its goal and has already met several of its intermediate objectives.

Some of these intermediate objectives were arrived at with the help of a World Bank team and are presented in the appraisal document. These include: hiring and training materials development staff at various organizational levels in at least six provinces; defining tasks and procedures for materials design and production teams; building and/or remodeling six audio-visual aids production facilities; purchasing and distributing AVA equipment for hundreds of district level offices; testing and preparing for the mass production of 100 booklets in a national basic education series; plus designing, testing and producing annual quotas of materials for a four-year period. Other objectives were set once the project was under way. These interim objectives were formulated in response to feedback from the field and served to modify the course of the project and to keep the materials activities moving towards their goal.

It was hoped that by meeting these impressive intermediate objectives at the end of five years, PENMAS would have a materials development component in place which would be capable of achieving the main goal. Despite many setbacks and difficulties caused in part by the immensity of the undertaking, most of these objectives have been met or will be met within the not too distant future.

Administrative Structure

It is important to view this project's materials development activities from the proper perspective. From the beginning, the size of the enterprise was the factor which most influenced the materials development component's plans, procedures, character and activities.

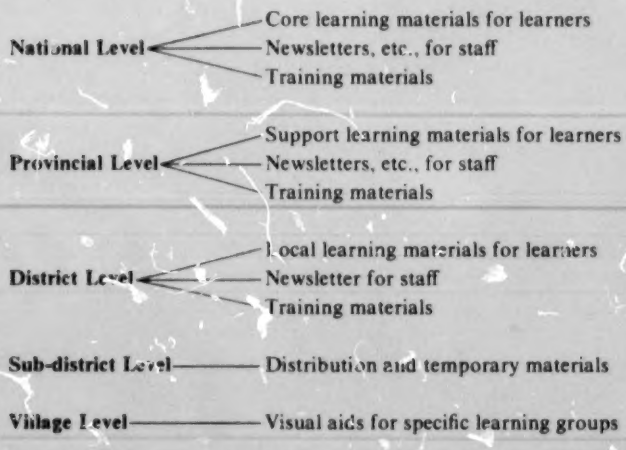
The key concept for those unfamiliar with the project is that materials are the output of a single system which has activities and operations on five administrative levels: village, sub-district, district, provincial and national. Four of these levels lie within PENMAS. The fifth, or village level, lies outside the PENMAS administration.

The levels refer to both the locus of administrative responsibility for producing the materials and to the distribution patterns for the materials themselves. For example, overseeing the design and manufacture of national level materials is the responsibility of the national directorate. That process, however, may require the involvement of other organizational levels. For example, the design of a national level material may be commissioned by the national directorate,

field-tested in villages with the collaboration of district and sub-district offices, and mass-produced at six provincial level printing facilities for nationwide distribution.

These five levels are the components for a single, massive, multi-tiered system. Despite the fact that many of the activities may appear to be unconnected or even in competition with each other for staff

FIGURE 3
MATERIALS PRODUCTION BY ADMINISTRATIVE LEVEL



time and resources, materials cannot be produced without cooperation and assistance between the various tiers of the organization. Problems, misunderstandings, logistical difficulties, or reluctance on the part of any one of these levels can inhibit or prevent the smooth operation of the system as a whole and can adversely affect the quality and effectiveness of the materials produced on the project. (See Figure 3.)

TYPES OF LEARNING MATERIALS

Learning materials on this project are designed and manufactured at four organizational levels. Each level is responsible for the coordination and production of specific kinds of materials.

National Level

The national level coordinates the development of two varieties of materials. The overwhelming majority of materials produced to

date at this level are materials to be used directly by learning group participants. These materials contain the core curricula for several PENMAS learning programs. The best example of this kind of material is a set of 100 booklets called Paket A. Paket A, which is discussed in a later sub-section of this chapter, contains the basic curriculum for the literacy and basic education program. Copies of Paket A are distributed to learning groups. At the same time, manuals for volunteer tutors are also distributed. The manuals contain detailed lesson plans for each unit and a series of suggestions for supplementary teaching activities.

The second kind of materials developed at the national level are used by regular PENMAS staff members. These materials include training modules, manuals, and newsletters. Prior to the end of 1981, relatively few of this variety of materials had been produced by the national directorate. As the organization grew in size and complexity, there was an even greater need to centralize and formalize communications to the field and office staffs. This became increasingly true as the focus of PENMAS program goals underwent a shift in emphasis. This shift was a response to incoming field reports. Program changes were required which demanded a slightly expanded set of skills for fieldworkers and for community volunteers. New kinds of training materials and manuals needed to be produced which would explain the newer kinds of programs. Although the actual training of field staff and volunteers is carried out at other organizational levels, the directorate wanted to produce materials which would both train trainers and provide examples of innovative training materials.

Several different media are used in producing training materials. Although the printed manual is still the predominant form, PENMAS has been experimenting with slide shows, overhead transparencies, audio tapes, posters, and games as training materials. For example, a three-part slide show on planning and producing slide shows has been developed but not yet tested. These slide shows are a mix of cartoon animation and typical life transparencies.

One effect of this new PENMAS project is a change in where new materials are designed and produced. The production of learning materials is being decentralized. The provincial level now bears the bulk of the responsibility for producing new materials. Prior to this project nearly all materials were produced at the national level and distributed through the provinces. Much of the material used for

communicating with and training fieldworkers and staff is still produced on the national level.

Provincial Level

At the provincial level many slide-tape modules, audio cassettes, posters, booklets, pamphlets, leaflets, folders and games are designed and tested each year. Eventually they will also be manufactured by the provincial centers. These learning materials are designed for mass production and distribution to learners throughout the province.

Some of the major criticisms of PENMAS' former structure were the over-centralization of materials development, the organization's inability to respond to diverse linguistic and socio-economic conditions, and the absence of technical support for sub-district fieldworkers. PENMAS shifted the responsibility of producing learning materials onto the provincial levels in the hope that this modification would improve the relevance of learning materials and activities to local conditions and at the same time facilitate coordination and feedback among PENMAS staff. For example, many provinces have produced slide shows designed to inform viewers about agricultural practices. In West Java a slide-tape module on raising sheep has been popular with learning groups. Other provinces have produced shows on chicken raising, pest control, and tree grafting.

Training manuals and newsletters for more limited distribution among district and sub-district staff are also produced at the provincial level. Most of the materials development activity has taken place at the provincial level over the past few years. Aspects of these activities are discussed in subsequent sub-sections.

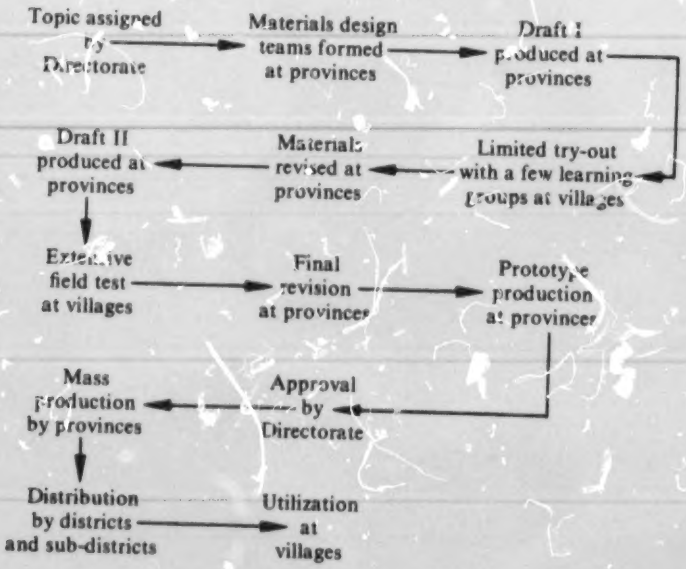
District Level

At the district level, plans call for simple printed materials to be produced for use by fieldworkers, tutors and learning group members. According to the original plan described in the appraisal document, the district PENMAS office together with the fieldworkers, monitors, learning group leaders, and learning group members were to produce learning materials using typewriters, mimeographic machines and hand drawings. Examples of these materials were described as newsletters, simple posters, games, informational and instructional items and practice reading materials for new literates. These materials, referred to as "local materials," should have a particularly vital role in balancing and adapting the centrally designed, mass-produced materials coming from the national and provincial levels. To date, district

level newsletters are the most popular form of local materials. In some districts enthusiastic groups have produced literacy practice materials, simple teaching machines, and puppet shows.

A VW mini-bus equipped as a micro-mobile printing unit has been located in one district in each of the six provinces. The plan was to experiment with it as a means for providing local materials of high technical quality. This experience is described in a subsequent sub-section.

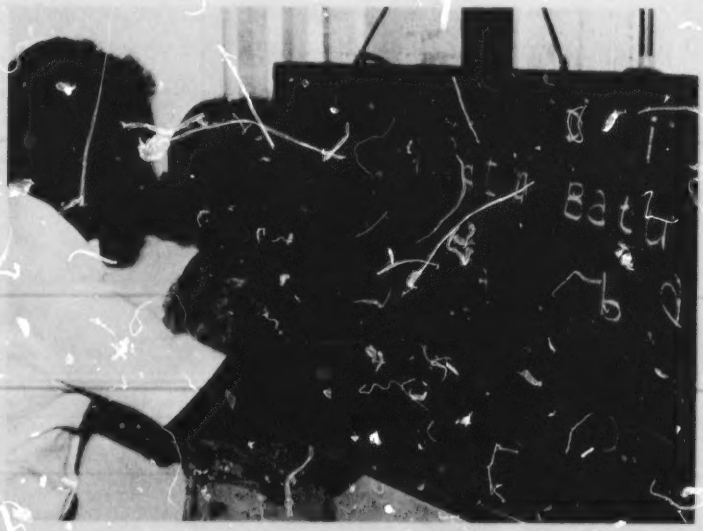
FIGURE 4
FLOW OF MATERIALS DEVELOPMENT SYSTEM


Topic assigned by Directorate
Materials design teams formed at provinces
Draft I produced at provinces
Limited try-out with a few learning groups at villages
Materials revised at provinces
Draft II produced at provinces
Extensive field test at villages
Final revision at provinces
Prototype production at provinces
Approval by Directorate
Mass production by provinces
Distribution by districts and sub-districts
Utilization at villages

Sub-district and Village Levels

At the sub-district and village levels, fieldworkers were to assist learning groups by providing paper, pencils, ink and other basic supplies. The groups were to use these supplies either to practice rudimentary reading, writing and arithmetic skills or to produce posters, games, stories, and learning activities for their own use. To

date, few supplies have been made available to learning groups for this purpose.



Literacy tutor helping learner

System Integration

One reason the PENMAS structure is so complex is that it is an attempt to combine centrally produced and locally produced materials within a single, integrated system. On a map of the PENMAS materials development system, the administrative levels correspond to major arteries on a road map. PENMAS administrative levels are linked by procedures, purposes and practices which bind the levels into a single, interdependent system. In other words, although an administrative level may bear by itself the responsibility for developing a particular kind of learning material, that material cannot be produced without involving other levels of the structure. (See Figure 4.)

For example, provincial centers are responsible for coordinating the production of approximately 50 different kinds of learning materials each year. Topics and general content areas for these materials are assigned by the national directorate. The provincial centers then

convene special teams consisting of staff members and domestic consultants. Once drafts are produced, the materials are tried out and field tested about 15 times in different areas of the province. This testing is often conducted by district and sub-district staff in collaboration with village volunteers. A revised version of the tested material is sent to the directorate for approval. Once approved, the drafts are returned to the provincial centers for mass production, distribution and utilization throughout the province. This pattern of interdependence is repeated for materials production coordinated by the national, district and sub-district levels as well.

Inhibiting Factors

To date the PENMAS materials development system has not yet been able to take advantage of the opportunities provided by its interdependent, multi-tiered administrative structure. This is a consequence in part of the system's newness and the inexperience of its staff at all levels. Another contributing factor is the climate of conservatism created by a bureaucracy. Enterprises requiring a great deal of creative imagination often suffer when tucked inside an established civil service. Wary of a supervisor's disapproval, staff members are reluctant to take the creative leaps and risks necessary to develop innovative, effective NFE materials. It is much safer to repeat what has already been done.

What is the effect of this interdependence? On the one hand, it opens the opportunity for production of an integrated body of materials produced by different administrative levels drawing from different experience bases, meeting different goals, and using different media and approaches, but unified by a common purpose and developed to be used in conjunction with each other as a comprehensive learning package. On the other hand, the system produces materials which are only as good as the work of its weakest component. If poor topics for provincial materials were allocated, if draft materials were poorly designed, if field testing were poorly designed or executed, if approval were delayed, or if production were careless, the material would suffer.

What is the effect of producing materials at four administrative levels? The multi-tiered structure has advantages and disadvantages. On the benefit side, the structure as a whole allows for the production of both highly centralized materials and decentralized local materials. This diversification of production can yield a tremendous divi-

dend in creativity. A balance between centrally and locally produced materials can result in a body of learning materials which promotes national goals and which is appropriate for the varied communities using the materials.

On the debit side, the four levels often replicate, instead of refining, mediocre materials. This is due in part to the four levels functioning within a disciplined hierarchy which reinforces cultural trends towards reproducing, without change, the kinds of materials distributed by the hierarchy's upper levels, even if experience has shown that these materials are ineffective. Also, the poor communication between administrative levels endemic in any bureaucracy is exacerbated by the difficulties of communications in Indonesia. Lack of information often results in fragmentation of effort. In short, the multi-tiered structure can promote either integration or fragmentation of effort. To know whether PENMAS has benefited or suffered from its complicated multi-leveled structure, one needs to examine the body of learning materials produced by the four levels. As of the end of 1981, there is little evidence of cohesion and integration.

Turbulence is another inhibiting factor. The entire system is affected if there are major changes at one administrative level. Radical changes have occurred periodically over the past few years. For example, in four years there have been five different individuals in the position of national level materials development coordinator due to promotions. Since the national directorate is heavily involved in allocating topics, approving materials, releasing funds and equipment and so on to the other levels, frequent changes in this position have a debilitating affect on the whole system. A second and more profound example of turbulence occurred when the entire district and sub-district levels of the organization were shifted from direct accountability to PENMAS to another section of the parent organization's bureaucracy. The exact impact of this shift on materials development and even the exact nature of its effect on procedure is not yet clear.

MATERIALS FOR LEARNERS

Packet A

Paket A consists of 100 booklets all written in the national language. The first 10 in the series serve as a graduated literacy and numeracy primer rounded out with some bits on health, family planning, agriculture and other topics. Each of the first 20 booklets

contains about half text and half illustrations. In each booklet basic reading, writing, and numeracy skills are mixed with supplementary exercises, illustrations, and one to two-page stories on nutrition, citizenship, or savings plans.

Paket A is the brainchild of Dr. W. P. Napitupulu, Director General of Nonformal Education, Youth and Sports and Secretary of BUTSI, the Indonesian Board for Volunteer Service. Dr. Napitupulu articulated four basic principles used in the preparation of the content areas for Paket A.

1. Relevancy of content to the daily life of the people
2. Adaptation of the primary school curriculum by making it more learner centered (i.e., less theoretical and more practical)
3. Relevancy of content to the Indonesian national objectives for basic education which include promoting nationhood, good citizenship through particular moral principles, as well as rudimentary reading, writing and arithmetic skills
4. Graduation of the complexity of the content and style of the booklet as well as coverage of math, literacy and information at more or less the same level of sophistication.

Roughly equivalent to the primary school curriculum, Paket A was designed to be the standard text used by a mass audience of hundreds of thousands of unschooled adults and primary school dropouts of all ages. Members of this mass audience speak one or more of the many Indonesian languages and may not be fluent in the national language, Bahasa Indonesia. Some of the learners are heads of households. Many are unschooled, unmarried adolescent girls or out-of-school youth. Many are school-aged children unable to continue their education in a formal school or for whom the formal primary school is inadequate or inaccessible. Some of the learners live in highland regions; some gain their livelihood from the sea.

Given the diversity of language, experience, circumstances, and habitat of the participants in this nationwide basic education program, given the scarcity of trained or experienced learning group tutors, and given the wide range of possible topics for basic education and literacy learning programs, Dr. Napitupulu and other high level officials felt there was a strong need for a standard, core curriculum developed around common needs. They felt that a standard, multi-unit curriculum and text should be written in the national language

and should teach Indonesian principles of citizenship and morality along with more standard literacy and numeracy topics. It was felt that a stable curriculum would help give this unwieldly project a sense of common purpose.

As the impetus for common purpose could only come from the national level, the list of topics and broad outlines for the booklets were determined by fairly high ranking officials. The participation of these officials is both a blessing and a problem for the Paket A Program. It is a benefit because without their participation it is unlikely that the series would have ever been designed, tested, revised and mass-produced. Their participation is a problem because their prestige and rank makes it difficult to revise the program even when its field performance demonstrates the need for revision.

Materials Produced Locally

Paket A was developed for a general audience of learners around problems and interest areas which national level officials felt were common. The need to support this general material with supplementary teaching aids developed locally has always been a part of the planning. The need for locally produced materials becomes increasingly felt as basic education programs are linked to programs in vocational education or market oriented learning groups.

Local materials have potential for meeting special needs and answering special interests. For example, a group with many young, teen-aged learners might need practice reading material specially written for this age group. Also, a market oriented literacy group might need supplementary materials teaching simple bookkeeping or other related skills.

In addition to the Paket A series, a few groups have access to offset newsletters or simple mimeographed materials. An examination of the language level and topic areas of newsletters from different parts of the country indicates that they are primarily designed for literate, fairly skilled, community volunteers and learning group members. Many of the articles discuss the PENMAS organization and explain how different kinds of learning groups are organized. Some columns are short articles on health, agriculture, cottage industry or local handicrafts. Other columns contain reprinted short stories from Paket A.

Offset newsletters are the output of an experimental approach in decentralizing the production of learning materials. In this experi-

ment, micro-mobile printing units (called *micropu*'s) were purchased. These printing units consist of VW buses outfitted with a small darkroom, offset print machines and platemakers, and a small cutting and folding machine. They also contained three typewriters with different size type, a generator, and some graphics design supplies.

The idea was for these *micropu*'s to drive into villages and produce materials on-the-spot from drafts written by fieldworkers, volunteer tutors and even learners. In this way the mysterious technology of printing could be brought to the remotest communities. Materials with high appeal for local participants could be produced in front of their eyes thereby heightening the fascination with the material and increasing the motivation to read it and practice newly acquired literacy skills. Designers of the *micropu* felt that the reading habit was difficult to acquire under the best conditions. For people who lived beyond the distribution patterns of even the most ambitious publisher, this habit would be nearly impossible to acquire. Much of reading fluency comes from practice, and there is virtually nothing for a neo-literate to read in rural communities. The *micropu* was a deliberate attempt to bring attractive, interesting, and appropriate materials of high technical quality to participants in the literacy and basic education programs.

Although the purpose of the *micropu* experiment was good and although the need it was fulfilling was pressing and real, the technology was not appropriate for field conditions. Communities most in need of the service were inaccessible by road as the conditions of rural roads in Indonesia would jar and upset the offset machinery mounted in the vehicle. Although the two-person *micropu* teams had been extensively trained in their operation, they were still far from being able to handle the technical problems of printing in hot weather in field conditions. Because the machines were imported, some supplies had to be imported from overseas. Delays in customs plus the expense of the imported supplies placed the unit cost of production far beyond early estimates. From this experience, PENMAS has formulated another approach to meet the same goals. PENMAS will try and locate facilities for producing simple printed materials in district and sub-district offices. In this way production of simple print materials is decentralized as far as the sub-districts although not as far as the communities.

Provincial Level Materials

The most profound changes in structure, performance and responsibility happened at the provincial level of the organization. Before this new project, the provincial centers produced no materials on their own but functioned as a distribution service for materials passed down to them by the national level. Under the new project, each of the six provinces would develop a print and non-print materials development and production capability.

The provincial level materials production centers would serve two vital functions in coping with the scale of the project. First of all, their print materials division would publish mass quantities of Paket A and any other core materials coming from the national level destined for mass production and distribution. In this way a serious logistical problem could be avoided: namely, where do you find a publisher who can print 11,000,000 copies of Paket A? A second function for the provincial centers was to produce their own learning materials, both print and nonprint, which could be used to supplement the Paket A curriculum or other PENMAS learning programs. So, in addition to printing capability, the six provincial centers needed to be able to design, test, modify and produce audio-visual instructional aids. The emphasis on posters and non-print materials is a deliberate response to criticism levied by the World Bank that PENMAS materials suffered from a lack of originality, innovativeness and creativity. Also, PENMAS was criticized for paying too much attention to pamphlets and booklets and not enough to other media as teaching aids.

The dual function of the provincial centers, mass production and design, mandated that the centers develop two distinct capabilities: one, the capability to produce printed materials in mass volume; and two, the ability to design educational materials. These functions demanded a team of skilled print technicians and a team of media design experts who could annually produce 50 or more master slide-tape shows, booklets, posters, etc., which would assist and support many kinds of learning groups.

Publishing mass quantities of Packet A requires a stable workplace equipped with appropriate machinery. Hence, provincial production centers were designed, equipped and built. To produce professional quality prototype materials also demands a stable workspace and appropriate equipment. Hence plans were made to build

and equip recording studios, darkrooms, and graphics design centers. Naturally, personnel needed to be hired and trained. Training programs in the USA and the Philippines, as well as in Indonesia, were developed and trainees were sent for 3–6 months of instruction.

All of these preliminary activities (hiring personnel, training the new people, building buildings, procuring equipment) were carried out in six locations simultaneously. Additional complications arose because decisions about staff, training, buildings and equipment were made in an information vacuum, since the needs and functions of the materials productions centers became clear only after the preparations were complete and the work already underway. By that time, modifications in the facilities were expensive, personnel changes unlikely and training funds already dispersed.

Each provincial center produces an annual quota of materials. In 1980/81, for example, the provincial centers were to produce 18 pamphlets, 9 sets of slides, 18 audio cassettes, 5 poster series and 6 training manuals. These materials are produced by the provincial staff working in collaboration with domestic consultants. According to the original plan presented in the appraisal document, these learning materials were to be developed by the staff in collaboration with "users": learning group tutors, participants, and fieldworkers. The process of designing learning materials was to be integrated into the fieldworker training programs which were to have taken place at the provincial centers. This plan proved to be unworkable.

The process used to develop these provincial level or supplementary materials varies from province to province, but the general progression remains the same. The staff is supposed to assess the needs for learning materials expressed by learning groups via fieldworkers. A list of topics is drawn up and sent to the national directorate which is responsible for allocating topics. Next, a list of approved topics is returned to the provincial centers. The provincial centers try to find domestic consultants to assist them with the preparation of the draft materials. This preparation can take place in a workshop or as part of the routine office tasks. Once all the drafts are complete, a limited try-out is conducted in a nearby location. Major re-writes, "re-draws," and "re-photographs" are made. Next, all the materials must be field tested. The Loan Agreement stipulates that no material produced by the provincial centers shall be mass-produced without being field tested in 4% of that province's sub-districts. In sparsely

populated provinces, field tests are conducted in approximately 8 locations. In densely populated provinces, field tests are carried out in about 20 locations. To test approximately 50 materials in about 20 locations is no small task. Testing each material using five respondents per location requires 5,000 tests. If the materials are tested for only 5 information areas, the testing will produce about 25,000 data items. Once tested, the materials are then revised and master copies are sent to the national directorate for final approval. Once approved, the masters are then returned to the provinces for mass production.

By the end of 1981, most provinces had produced and tested at least two or three cycles of supplementary learning materials. Yet, since the mass production facilities are not yet fully operational and the national directorate is sometimes too busy to respond to master materials in a timely fashion, no materials produced by the provincial centers have as yet been mass-produced, distributed or used.

This project calls for four cycles of materials to be produced under this project. All of these materials are considered to be part of the provincial staff's training. To date, the emphasis had been on learning how to produce supplementary materials by actually producing the materials. Considering that these materials are produced by an inexperienced, partially trained staff under adverse conditions in incomplete facilities, the supplementary materials seem of good quality. Because these materials are a part of the staff's training, the emphasis has been on producing samples of the different possible educational media. In this way provincial staff members learn how to produce tapes and slide shows, how to design poster series and so on. Once the provincial staffs become adept at the techniques involved in producing media, they can begin to turn their attention to educational issues.

Even though provincial staffs have been primarily concerned with mastering skills and techniques, some of the materials they have produced are innovative and demonstrate a creative potential. For example, dominoes is a popular game in Indonesia. In one province this game was adapted into a learning material which could be used by tutors with basic education groups. Other provinces are experimenting with taking one topic area and developing a series of materials in different media on that topic. As the provincial teams become more experienced with developing materials and have more feedback

from the field, they will be able to apply their new skills to creating interesting and informative learning materials.

Materials For PENMAS Staff

Into this category of materials for staff fall training modules, manuals and newsletters. All three kinds of materials are produced at the national and provincial levels. In this section only the national level materials are discussed.

The national directorate is responsible for developing a certain number and kind of training modules for use by the provincial staff. The provincial staff uses these materials in two ways: one, as part of their annual in-service training programs and, two, as examples to be followed in developing their own training materials. As the provincial staff is responsible for coordinating and conducting the training of all the fieldworkers in that province twice each year, good quality training modules are important.

The national directorate had a problem. Charged with the responsibility of producing innovative training modules, the national directorate had no staff and no facilities with which to develop those modules. The directorate had a few options. They could sub-contract with another part of the ministry or with a private organization to produce modules to their specifications. They could hire domestic consultants to produce draft materials; or they could try to develop their own materials design facility.

The national directorate tried all three options. The Educational and Cultural Communication Technology Center (TKPK) of the Ministry of Education and Culture was contracted to produce a set number of slide shows on training techniques. Domestic consultants were asked to draft certain manuals. A special task force (SATGAS) for designing and producing national level modules was created. The task force had two locations: one in Jakarta and one in a rural area of West Java. A workplace was established and equipment purchased.

This task force was to accomplish several purposes. Firstly, it was to produce innovative, instructional training modules. Secondly, it was to become a place where PENMAS could send materials development staff from any organizational level for intensive on-the-job training in specific areas of materials design and production. Thirdly, it was to provide a cadre of experienced domestic consultants who would be available to the provincial, district, and sub-district staffs. Finally, the task force could eventually become a

center for research and development for training and educational materials.

To date, the return on the rather large investment of equipping these task forces is still uncertain. They are located in existing institutions which are not part of the PENMAS system but which are part of the larger system to which PENMAS belongs. These institutions have their own responsibilities and tasks which are not necessarily the same as those of the PENMAS directorate. Staff time is often a problem as personnel are not always available to work on the PENMAS modules. Despite the difficulties and setbacks, the task force approach still has fundamental advantages over the other two alternatives. Over time the difficulties may smooth out, and the task forces may be able to perform their various purposes.

Building Institutional Facilities

During the first few years of the project, much of the activity has been focused on creating the institutions which will create the materials. This institution building activity has included:

- building, equipping and supplying materials development facilities in 4 provinces and upgrading the existing facilities at 2 provinces;
- re-structuring the administration of the provincial centers to allow for a consolidation of previously dispersed materials development activities; and
- hiring and training staff.

To date, the task of building, equipping and supplying the materials production facilities is nearing completion. Staff has been hired and trained. The materials development section has been formed and has managed to complete at least one to three cycles of designing masters of supplementary materials for learning groups. Yet, despite all this activity and progress, some problems still remain.

Problems with the architectural designs for the materials development facilities at the six provincial centers were apparent to one foreign consultant experienced in that area. The production facilities had, on paper, too little water, electricity and space for some of its functions. Ventilation and climate control were also problems in some cases. In addition, the floorspace was divided in ways appropriate for office and storage areas but impractical for a materials design and production center.

Unfortunately, by the time help was available, the buildings had, for the most part, already been constructed. Improvements, though, were still possible. Many staff and consultant hours went into drawing up lists of needed equipment and detailed illustrations of necessary improvements and revisions. The principle behind these lists and drawings was basic: a workplace needs to be designed around the kind and volume of work to be performed in that space. To make a viable design, an architect or contractor must understand the nature of the activities to be carried out, their sequence, and the volume of work to be conducted in that space. This is particularly true of areas holding heavy or sensitive equipment. Such space must be carefully planned around tasks and equipment specifications.

Problems were exacerbated by simultaneous building efforts. Some problems were compounded by changing definitions of the kind and amount of work to be done. The net result is the construction of materials development centers which need some renovations and remodeling before they can be used to full capacity. There were major problems with the design of the recording studios, photographic and plate-making darkrooms, and to a lesser extent with the print shop area itself.

Professional quality recording equipment had been imported in order to create studios capable of producing and copying broadcast quality cassette tapes. But recordings of high technical quality are only partially a function of the equipment used. A few of the new sound studios were unusable because of problems with ventilation, electricity, and acoustic material (in some cases the acoustic material had been installed in the wrong room). Because the requirements for a good recording studio were imperfectly understood, many expensive errors were committed.

To turn the machinery into a print facility requires the purchase of many supplies and some additional equipment. Function-specific pieces of furniture and storage spaces also needed to be designed. The same kind of attention is needed to turn dark closets into darkrooms. Problems with the provincial facilities are possible to remedy. A great deal of specialist time has been devoted to helping provincial teams assess their work space and the facilities needed. Plans for renovations are made together with the now more experienced provincial teams. Hopefully, by the time this project is over, PENMAS will have the teams and facilities in place to produce high quality, effective learning materials.

One interesting side issue is the relationship between the kind of equipment purchased and the commitment to a particular method for producing learning materials. For example, the recording set-up in the provincial centers is exclusively for in-studio recording by trained audio technicians. Field recording with ordinary cassette recorders will not produce a master tape of acceptable quality. This limitation of production techniques in turn influences the kind of program formats possible for the provincial centers. Since learning group members are likely to be stiff and uncomfortable in a studio surrounded by unfamiliar equipment, it is likely that experienced or professional voice actors will be used on the tapes. If provincial teams wish to use field recordings and to encourage the participation of learning group members in the production of audio tapes, one professional quality cassette recorder would have to be imported for each provincial center.

CONCLUSION

According to the Loan Agreement between the Republic of Indonesia and the World Bank, PENMAS was responsible for developing a learning materials production system which would "develop, produce, and distribute improved non-formal education learning materials." This report has summarized the complicated learning materials system which PENMAS has created for itself over the past few years.

The mandate described in the loan agreement is really two mandates: one, "to develop, produce, and distribute . . . materials" and the other, "to (improve) non-formal education materials." The materials development system described in this report was established with the intention of fulfilling both of these functions. Much of the project's attention has been focused on creating facilities, training staff and developing a system to fulfill the first mandate. Recently, as the system has begun to function, attention is being paid to producing improved nonformal education materials.

Of the two, the second mandate has proved more difficult. Creating effective nonformal education materials which meet program goals, which are attractive and innovative, which are interesting to learners and which are appropriate to learners needs is a task requiring skills which the PENMAS staff is only beginning to acquire. Only time and practice are needed to complete the requirements and to raise the educational as well as the technical quality of PENMAS materials.

FORMATIVE EVALUATION

GUIDING PRINCIPLES

Developing a Formative Evaluation System for a Large-Scale Community Education Program

1. Planning for evaluation activities should start before a project begins so that it can be integrated with other project activities when appropriate. This will increase substantially the usefulness of the evaluation data.
2. Goals and objectives of a project must be clearly defined and include a measurement of success. Setting measurable objectives is important to project managers so they and their staff know what has been achieved and what has to be achieved.
3. Expectations of the outcome of evaluation efforts should be realistic and dependent upon the ability and previous experience of the evaluation staff.
4. Project management teams should not try to do everything at once in an evaluation. Collect only the data that is essential for program improvement, otherwise the staff will be burdened with performing useless tasks.
5. Evaluation is equally as important as other program functions, such as program planning, materials development, and training, for it helps determine what has been effective and what needs improvement. This information is vital in setting future directions. Thus, program staff should not feel threatened by evaluation results, but view evaluation as a helpful tool for planning.
6. Evaluation designs should include quantitative and qualitative approaches to maximize the benefits from the strengths of each approach.
7. Rely on available information and statistics. Check related agencies, organizations and institutions. This will save time and resources.
8. For evaluation efforts to work, problems have to be identified so that steps can be taken to correct them. If this principle is ignored, then evaluation will be ignored.
9. With a long-range perspective on evaluation activities, short-range expectations may be too large and overwhelming. Change takes time.

Evaluation Past

> PENMAS is concerned that evaluation has not been an integral part of programs in the past. Management is aware that it has not been provided with the continuous stream of information necessary to discriminate at an early stage between successful and unsuccessful programs and practices.[1]

PENMAS has had more than twenty-five years of experience with adult education although, as noted earlier, this experience was interrupted by the political turmoil of the mid-1960's. This experience did include extensive work in program development, training, and educational materials development. PENMAS, therefore, had an organizational history in these areas of concentration as it moved to implement the Nonformal Education Project.

The organizational history of PENMAS in terms of evaluation, however, was minimal. What experience the organization did have with evaluation was limited to fear-inducing inspections and monitoring. Prior to the initiation of the Nonformal Education Project, both the PENMAS management and the World Bank appraisal team saw evaluation as an area of weakness in previous PENMAS experience. Past efforts at evaluation had been mostly devoted to measuring "end products" (number of courses provided and number of clients served) while "little effort had been devoted to measuring the impact of training on participants."[2] Inadequate emphasis had been attached to evaluating PENMAS processes. There had been almost no efforts to provide a continuous stream of information useful to decision makers. Given this organizational history in evaluation, PENMAS had to begin its evaluation efforts in the Nonformal Education Project with an extremely limited knowledge base of evaluation strategies and techniques, and virtually no staff with which to implement those strategies and techniques.

Evaluation Proposed

As stated in the appraisal document, a principal goal of the project was to introduce continuous evaluation of the PENMAS programs. The project was to assist PENMAS in the development

1. *Indonesia: An Appraisal of a Nonformal Education Project.* The World Bank, August 19, 1977. p. 11.
2. Ibid.

and implementation of an evaluation system containing two major components: (1) a planning and performance monitoring system, and (2) a mid-term review of the evaluation program conducted under the auspices of the Office of Educational and Cultural Research and Development (BP3K). In essence, the first component would focus primarily on the analysis of process data (formative evaluation) and would be principally a PENMAS activity, while BP3K would concentrate on "assessing the degree to which PENMAS had met its objectives (summative or impact evaluation)."[3]

The formative evaluation, which is the focus here, was conducted primarily by the staff of the provincial offices of PENMAS. They were mandated to address such issues as the extent to which the target group was being reached by PENMAS staff and whether project materials and program delivery were appropriate to user needs. This staff was also responsible for evaluating the effectiveness of PENMAS organizational arrangements and staffing procedures, including training activities, and for conducting follow-up studies on PENMAS' learning group participants. Program monitoring efforts would have to determine the relevance of the educational needs identified by fieldworkers and the suitability of the educational activities and delivery techniques to local conditions.

Underlying the general delineation of responsibilities for formative evaluation was the assumption that a working structure and a capable staff had to be "built," particularly at the provincial level. Much of the effort in the early years of the project was put into this building effort. The tension produced between the demands for evaluative information and the necessity to build a structure and a skilled staff produced an interesting lesson in expectations which will be discussed later. Given this tension, what comprises the building process?

Evaluation Implemented: Building the System

Much of what has been done in PENMAS as part of the Nonformal Education Project may be thought of as "institution-building": building the capabilities of PENMAS to carry out its programs effectively and efficiently. For the evaluation component, this effort has meant a series of complex, often painful and slow steps in building a pipeline through which evaluative information could flow.

3. Ibid.

Some of these steps were of particular importance because they were so basic. The experience gained in taking those steps was valuable for PENMAS and may also be valuable to other agencies and institutions which plan evaluation for similar large-scale nonformal education programs. Therefore, it seems important to share the most important of these experiences here. They include:

- providing "idea frameworks" upon which an evaluation system (and a project) may focus
- providing a structure for evaluation staffing
- defining position responsibilities for the evaluation staff
- defining the needs, problems and competencies of the evaluation staff
- providing training in basic evaluation procedures for inexperienced but key evaluation personnel

A framework of ideas was very important to this project, not only because it provided a focus (almost a philosophy) for project staff, but also because it served as a data gathering framework as well. This framework was the *Ten Basic Characteristics of the Learning Process* developed by Drs. Anwas Iskandar and described in Chapter I. The Ten Basic Characteristics was particularly important in the development of two data gathering instruments: a long questionnaire and a mail-in post card. Questions were developed for these instruments from each of the characteristics for inclusion in these instruments. Although the information was principally of a monitoring nature (amounts of inputs and outputs) rather than strictly evaluative, it was still important information, particularly in such a large-scale project. Project staff were required to know the Ten Basic Characteristics and this made initiation of a data collection system easier.

At the request of the World Bank, another framework for data collection was developed early in the project. This framework was essentially complementary to the Ten Basic Characteristics, although there was occasionally an overlap. This framework, known as the Key Indicators, became the basis for the annual report to the World Bank. Again, the emphasis in this framework is on quantities of inputs and outputs, an emphasis which tends to avoid such key issues as effectiveness of staff training and the quality of training occurring inside learning groups. A list of the Key Indicators is given at the end of this chapter.

The Ten Basic Characteristics and the Key Indicators frameworks are valuable because they help key project staff to answer the question, "What happened?" For a large-scale project, this is an important question simply because so much does happen and decision makers are anxious for this type of data so that they can control often unwieldy operations. For a large-scale project, it is also easier to answer the "what happened" question than some other evaluative questions. The "what happened" question in a large project usually means finding *whether* something happened (yes or no) rather than determining *how* or *how well* something happened.

Several related thoughts or suggestions regarding the data or idea frameworks emerge from the PENMAS experience and may be useful to planners, decision makers and evaluators who contemplate beginning a large nonformal education program and its evaluation system:

1. It is important to produce a set of Key Indicators for a large-scale project. The Ten Basic Characteristics and the Key Indicators used in this project can supply ideas for such a framework, but other indicators can be added according to the character of the project. Such a framework is an important focusing tool for data collection and project implementation.
2. If the key indicators developed are only oriented towards monitoring input-output types of information, it is important to realize that there are other questions that require answers, particularly evaluative questions regarding appropriateness, efficiency and effectiveness. Therefore, care should be taken to include indicators of this type.
3. The "matter of scale" in a large project can definitely affect how much and what kind of data can be collected. It therefore may be practicable only to collect the "what happened," input-output information during the early stages of a project. This should be regarded, however, as a first phase. The second phase must be planned to include the more strictly evaluative information noted above. An alternative to this type of phased arrangement would be to begin a project by collecting a small amount of monitoring information as well as perhaps information on even one "evaluative" question on a regular basis.

Another system-building experience worth sharing concerns the structure given to the PENMAS evaluation operations. This administrative structure was called SPEM and was most visible at the provincial level of the PENMAS system. The overall structure of PENMAS generally follows the administrative levels of the government: national, provincial, district (kabupaten), sub-district (kecamatan) and village. The provincial offices of PENMAS in the six project provinces were divided into five functional units: (1) Program, (2) Learning Materials Development, (3) Training, (4) Technical Secretariat and (5) Feedback and Evaluation (SPEM).

The SPEM or evaluation unit in each provincial office of PENMAS consisted of five persons. One of the five persons acted as an administrator or leader. The other four persons carried out the four principal functions of the unit: supervision, reporting, evaluation, and monitoring. In Bahasa Indonesia, the titles of these four functions formed the acronym, SPEM. SPEM stands for Supervisi, Pelaporan, Evaluasi and Monitoring. The only word whose meaning is not readily apparent in English is *Pelaporan* which means "reporting." *Supervisi* specifically applied to the supervision of materials utilization and distribution. *Pelaporan* (reporting) referred to statistics and records. *Evaluasi* specifically meant the evaluation of training. *Monitoring* meant monitoring of program activities in the field. These at least were the functions of SPEM as outlined by PENMAS management at the beginning of the Nonformal Education Project.

During the life of the project, SPEM has also become a way to think about collecting evaluative information. Obviously the acronym was formed, with the letters S, P, E, and M appearing in the order that they do, more with an eye towards producing a memorable or "catchy" acronym than illustrating a chronological process. This is not a criticism; acronyms are frequently formed in this fashion. *Pelaporan* (reporting), for example, is most likely to come near the end of an evaluation process. Much of the emphasis during the first years of the Nonformal Education Project have been placed on monitoring program activities and increasingly towards evaluation of training. Methods and instruments have been developed to implement the monitoring, training evaluation and reporting functions. Several of these will be described shortly.

For planners, administrators and evaluators thinking of future large-scale nonformal education projects, however, what is impor-

tant here is (a) the existence of a structure and (b) the experience of implementing this particular structure. In retrospect, given the difficulties encountered in implementing such a large-scale evaluation system, it is interesting to think of the alternative to having a specific administrative structure (such as a SPEM unit) for evaluation, that is, having no specific unit at all for evaluation. In practice at least, this is precisely what has happened at the national training center at Jayagiri. There is a specific unit for evaluation, but it is largely ignored and circumvented. The reasons for this are complex, but it is significant that some evaluation activities do take place without the participation of an administrative structure for evaluation. The alternative then, as used informally at Jayagiri, is to have evaluation activities take place within other administrative units. For example, the administrative unit in charge of training would evaluate training activities, and the materials development unit would evaluate the effectiveness of the various types of learning materials. This system could be slightly formalized by appointing one person within these other administrative units to be in charge of evaluation. These persons could meet regularly as a unit.

There are several advantages to having no specific evaluation unit. First, it is less of a visible threat. Evaluation units sometimes have the unfortunate problem of being viewed as inspection squads. Second, it makes the administrative structure somewhat simpler. Third, it allows the evaluation person within the other functional units to be more specialized and focus more clearly on the evaluation of a specific function. Finally, and related to the first advantage, it could allow evaluation to more smoothly become a part of the other project functions.

There are disadvantages too, however, to having no specific evaluation units, especially at the intermediate levels of a nonformal education project. These disadvantages emphasize the importance of the existence of an evaluation unit. First, if there is no specific evaluation unit, there is a good chance that the importance of evaluation might be lessened within the overall project plan. That indeed could have been a danger in PENMAS. Second, there is the problem of obtaining less objective data since there would be a tendency for evaluation within other administrative units to protect the reputation of those units. The "protection of reputation" has already posed problems for data collection in PENMAS. Finally, having no spe-

cific evaluation unit complicates the flow of evaluative information into various units. With communication being one of the major problems in a project covering such a wide geographical area as well as having a complex administrative structure, this last point becomes very important.

A good case can be made for either of these structural alternatives: having or not having a specific evaluation unit. Of course there are variations or compromises between the two alternatives. PENMAS chose to have evaluation units, and the size of the project probably had much to do with that choice. Again, "large-scale" becomes a determining factor in evaluation operations, with the need for a clear-cut administrative structure taking priority.

PENMAS chose a particular type of administrative unit, SPEM, to implement its evaluation activities at the provincial level, and the experience with that structure is informative. The division of labor within the SPEM units largely, but not completely, follows a pattern of evaluation structures within more formal education projects. Like those formal projects, SPEM's staffing pattern includes typical positions like: director or administrator, instrument specialist, data collection specialist, data processing specialist, and reporting specialist.[4]

Given the manpower problems of PENMAS, the SPEM division of labor is quite good. There are a couple of problem areas, however, First, there is the problem of *supervisi*. Supervision is an activity which does not seem to have a role in the modern evaluation unit. Supervising has a managerial tone to it. Evaluators shouldn't really be supervising or managing anything in projects such as this because of the danger of the evaluation personnel becoming "hatchet-persons" for administrators, therefore adding to the already present problem of the perceived "threat" of evaluation. In this case, *supervisi* meant only the supervision of learning materials and learning equipment. This really is a "storekeeping" function and perhaps better belongs in the Technical Secretariat, Program or Materials units. The principal concern is that evaluation units have so many important activities to do that they shouldn't have to bother with storekeeping. A second problem in SPEM is that the *pelaporan*

4. See Stufflebeam, Daniel et al. *Educational Evaluation and Decision Making*. Itasca, Illinois: F. E. Peacock Publishers, 1971, Chapter 9, pp. 267-290 on "Organization and Administration of Evaluation Units."

(reporting) person seems to be mainly occupied with data processing and analysis. Combining data analysis and reporting is not inherently bad, but it might give this person a disproportionate amount of work to do in comparison to the other positions. Related to these two problems is that the words, *supervisi, pelaporan* and *evaluasi* do not accurately describe what persons in these positions would do.

Before reflecting on the experience of SPEM, it is appropriate at this point to describe another task in the development of the evaluation system, preparation of job descriptions for the SPEM positions. This might seem a little mundane, but in the context of a large-scale project, job descriptions can provide evaluation personnel with an important sense of direction, especially early in a project when lack of knowledge and direction are most apparent. This was certainly the case in the PENMAS project.

During the first six to eight months of the project, SPEM staff were appointed from other PENMAS functional units and were assigned to fill the five SPEM positions in each of the provincial offices. Unfortunately, during all of these months the five positions remained only boxes on a chart with just the titles to vaguely indicate what these personnel were to do. There is a lesson in this experience.

There is also perhaps something to be learned from presenting the job descriptions that were finally prepared. Great effort was made at the national level to prepare job descriptions which stressed interrelationships, not only among the SPEM staff roles, but with personnel of the other units. Planners from other organizations or agencies may be interested not only in the content of the job descriptions but also in the format in which they are presented. These job descriptions are presented in Figure 5.

It is important to note that the development of a job description does not make the activities described actually happen, although many people make that assumption. This situation does not necessarily reflect on the quality of the job description, although a clear job description can be most helpful, but it is highly dependent on a wide variety of other events and pressures. For example, in PENMAS, the existence of a clear job description helped only in a minimal way during the first two years of the project because the SPEM staff had neither the experience nor the training capabilities to carry out the assigned tasks and activities. The pressure came from the demands of outside agencies and from PENMAS management for certain basic

FIGURE 5 JOB DESCRIPTION OF

WORK UNIT	TASKS	ACTIVITIES
HEAD OF SPEM UNIT (KEPALA)	To prepare plans, examine analyses and coordinate program implementation activities of SPEM with the tasks of the Balai PENMAS (provincial PENMAS offices)	1. To coordinate the development of programs and develop a schedule of SPEM activities in the Balai PENMAS. 2. To build work relationships with other (units) that tighten relationships in tasks containing evaluation issues. 3. To prepare ways of presenting information to the head of the Balai PENMAS. 4. To help the head of the Balai PENMAS in preparing programs for the control of Balai PENMAS activities. 5. To coordinate the supply of feedback to bring up answers to the Balai PENMAS programs. 6. To help the other work groups in planning and implementing SPEM activities. 7. To lead and control activities to be implemented by the Balai PENMAS. 8. To coordinate the administration of data about Balai PENMAS activities. 9. To build working relationships with all work groups. 10. To coordinate the preparation of monthly, quarterly, and annual reports. 11. To help the work groups of the Balai PENMAS, BKPM, SKB and the peniliks to implement evaluation of their activities. 12. To prepare ways of measurement of the Ten Basic Characteristics of Learning. 13. To help the leader of the Balai PENMAS in coordinating the preparation of the contents of penilik training about SPEM. 14. To help the leader of the Balai PENMAS in coordinating the required supervision activities of the Balai PENMAS. 15. To help the leader of the Balai PENMAS in coordinating the preparation of monthly, quarterly and annual reports to the PIU.
REPORTING AND STATISTICS	1. To coordinate the implementation of data collection. 2. To organize the administration of data. 3. To prepare reports. 4. To prepare plans to collect data.	1. To prepare plans to collect data. 2. To prepare a list of data that is needed by the Balai PENMAS, Masorda and Penilik. 3. To prepare and develop tools to collect data. 4. To help the leader of the Balai PENMAS coordinate the implementation of data collection. 5. To tabulate, classify and analyze data. 6. To present data in the form of tables, graphics, charts. 7. To organize, store and coordinate data from the Balai PENMAS. 8. To serve all work groups in the Balai PENMAS in regard to data. 9. To prepare monthly, quarterly and yearly reports. 10. To edit the writings or data collection instruments that are closely associated with the Balai PENMAS. 11. To help the leader of the Balai PENMAS in coordinating the monitoring of Balai PENMAS programs.

PROVINCIAL SPEM STAFF

STANDARDS OF EVALUATION	WORK SYSTEM
1. Existence of a schedule of activities for the implementation of SPEM. 2. Existence of scheduled weekly meetings with SPEM unit. 3. Existence of scheduled monthly meetings with other work groups. 4. Existence of a list or resources or instances that show that working together has occurred. 5. Existence of an outline for reports about evaluation, monitoring and supervision. 6. Existence of tools for collecting data. 7. Existence of instruments for implementing self-evaluation for the staff of work groups of the Balai PENMAS, BKPM, SKB as well as the peniliks. 8. Existence of data that is measurable. 9. Existence of data that already has been gathered and published by other agencies. 10. Existence of indicators for evaluation. 11. Existence of figures for determining the value of each indicator. 12. Existence of an outline for reports and feedback for the head of the Balai PENMAS and the work groups. 13. Existence of organized reports to the Balai PENMAS leader. 14. Existence of weekly feedback in an organized fashion and its flow to the other work groups. 15. Existence of an implementation guide for SPEM tasks and elements of the SPEM unit. 16. All implementers of SPEM carry out their tasks in accordance with the job specifications. 17. Existence of a monthly, quarterly and annual report of Balai PENMAS activities that are organized by PIU/PENMAS. 18. Existence of a monthly report to PIU/PENMAS.	1. In implementation of activities, responsibility is to the head of the Balai PENMAS. 2. In implementation of activities, working together with all of the work groups of the Balai PENMAS. 3. In implementation of tasks, delegating authority to subordinates appropriate for the tasks.
1. Existence of scheduled data collection activities. 2. Existence of data lists that must be in the possession of the Balai PENMAS, Masorda, and penilik. 3. Existence of instruments for data collection. 4. Existence of tables, graphics, charts, accurate data. 5. Existence of data lists (of data that already exists). 6. Existence of ways for data collection. 7. Existence of instruments for data collection. 8. Existence of monthly, quarterly, annual reports for PIU. 9. Existence of data concerning (the shape of) PK10. (Ten Basic Learning Characteristics)	1. In implementing these activities responsibility for answering to the head of the SPEM unit. 2. In implementing his/her activities, working together cooperatively with all SPEM staff. 3. In implementing his/her activities, working cooperatively with Balai PENMAS staff.

WORK UNIT	TASKS	ACTIVITIES
MONITORING	1. To plan the program for the implemention of monitoring.	1. To prepare a schedule of implementation or monitoring activities of provincial, Masorda and penilik programs. 2. To collect data/information for the implementation of activities between the Balai PENMAS and other: 2.1 Basic education programs 2.2 Women's education programs 2.3 Community teaching programs 2.4 Intersectoral programs 2.5 Special programs 3. To collect data/information about the implementation of activities in kabupatens and kecamatans. 4. To help prepare the classification and analysis of data. 5. To make Balai PENMAS monitoring instruments. 6. To collect data about planning/implementation and results of each Balai PENMAS program. 7. To help Balai PENMAS staff, Masorda, SKB and peniliks in the implementation of monitoring activities.
EVALUATION	1. To plan and coordinate the implementation of evaluation training activities in the Balai PENMAS.	1. To prepare plans for implementation of the evaluation of the evaluation training activities by the learning materials, program, SEKTEK and training units. 2. To prepare evaluation instruments for training, SEKTEK, learning materials, program units. 3. To collect data results from the evaluation of training. 4. To classify, tabulate as well as analyze evaluation data. 5. To present evaluation results (in cooperation with the Statistics staff member) to the Balai PENMAS leader and the appropriate Balai PENMAS staff. 6. To help other work groups to analyze training activities and improve those activities. 7. To give feedback to Balai PENMAS work groups, Masorda, peniliks.
SUPERVISION OF EQUIPMENT AND LEARNING MATERIALS UTILIZATION	1. To plan and coordinate the activities for the supervision of Balai PENMAS equipment. 2. To plan and coordinate activities for the supervision of Balai PENMAS learning materials distribution.	1. To prepare a schedule of activities for the supervision of the distribution and use of Balai PENMAS equipment. 2. To organize the supervision of Balai PENMAS equipment distribution and use. 3. To implement supervision activities for the distribution and use of equipment in the provinces, kabupatens, and kecamatans. 4. To implement supervision of learning material use and distribution in the provinces, kabupatens, kecamatans. 5. To prepare instruments for equipment supervision. 6. To prepare instruments for learning material supervision. 7. To give technical assistance to staff of the Balai PENMAS, SKB, Masorda (and peniliks) on learning material distribution and use. 8. To give assistance in planning and implementation of learning material testing and tryouts.

STANDARDS OF EVALUATION	WORK SYSTEM
1. Existence of the implementation of Balai PENMAS monitoring that is scheduled each month. 2. Existence of good data about the PENMAS program activities from the provinces, kabupatens, and kecamatans. 3. Existence of good program monitoring instruments for the provinces, kabupatens, and kecamatans. 4. Collection of data that matches needs.	1. In implementing activities, his/her responsibility is to answer to the head of the Balai PENMAS unit. 2. In implementing activities he/she must work together with all of the SPEM staff (cooperate) especially with the staff members for Statistics and Evaluation. 3. In implementation, cooperate with Balai PENMAS staff.
1. Existence of evaluation planning and implementation activities that are scheduled each month. 2. Existence of evaluation instruments for each PENMAS activity. 3. Existence of a report of the results of activities each month. This report is for the leader of the Balai PENMAS and appropriate Balai PENMAS staff. 4. That there is a meeting (scheduled) each month with other work groups.	1. In implementing activities, his/her responsibility is to answer to the head of the SPEM unit. 2. In implementing activities, he/she must cooperate with other SPEM staff. 3. In implementing activities, cooperate with all Balai PENMAS staff.
1. Existence of activities for the supervision of equipment and learning materials that are scheduled monthly. 2. Existence of an equipment list that will be and already has been distributed for each level. 3. Existence of a list showing the names and total numbers of learning materials that will be and already have been distributed to each level. 4. Existence of instruments for the supervision of equipment and learning materials for each level.	1. In implementing his/her activities, responsibility is to the head of SPEM. 2. In implementing his/her activities, there must be cooperation with all SPEM staff but especially with the Statistics person. 3. Cooperation with all Balai PENMAS staff, especially with Materials and SEKTEK.

evaluative information at a time when almost no one was capable of collecting that information or making sense of the job descriptions. This is the lesson in expectations to which reference was made earlier. It is somewhat analogous to learning how to ride a motorcycle in Jakarta; the rider has to know how to operate the controls of the machine, know the rules of the road (written and unwritten), and also navigate or be concerned about which road to take. Putting this all together so that everything works smoothly takes time. Until there is a certain level of knowledge and coordination, there will be great personal demands and pressures. This was certainly true in the SPEM staff during the first few years of the project, but this will gradually decrease as capabilities increase among those staff.

A fourth major experience of particular interest in "building the system" concerned the processes of defining the needs, competencies and problems of the evaluation staff. Although the lack of experience of the SPEM staff in evaluation was generally known, there was little information about their capabilities, what they wanted to know about the project and about evaluation, and the problems they saw in the operation of SPEM after eight months of project activities. The method by which this information was gathered proved to be interesting and useful. The information itself helped in the formulation of the job descriptions and gave the PENMAS staff a better appreciation of the pressures and frustrations of the SPEM staff. The principal data gathering method was called the Q-sort technique.

The Q-sort is a variant of the ranking method developed by William Stephenson in 1953.[5] It has been used in personality research as well as other types of highly structured research and has also been shown to be a highly valuable instrument for self-rating. Carl Rogers and his associates adopted the Q-sort in 1954 for research on the effectiveness of psychotherapy. In the PENMAS project, it was adapted as a needs assessment technique in order to learn the problems and needs of the SPEM staff.

The technique required individual persons to sort a set of cards, each of which contains a descriptive statement (problems, solutions, ideas), into clusters or piles. The individual is asked to sort the card statements into seven piles according to their importance (Pile 1

5. Stephenson, W. *The Study of Behavior: Q-Technique and its Methodology*. Chicago: University of Chicago Press, 1953.

would be most important and pile 7 the least important) until the individual has an array of cards in front of him or her that looks like this:

1	2	3	4	5	6	7
Most Important						Least Important

This ranking process is further structured by having the individual first select the one most important statement/card, next selecting the one least important statement/card and proceeding on an alternating basis through distribution of the remaining cards into the other piles (i.e., 3 "most important" cards into Pile 2; 3 "least important" cards into Pile 6; 5 cards that are most important into pile 3; 5 "least important" cards into pile 5; and finally the remaining cards are placed in pile 4). The "sort" can then be quantitatively scored by recording which questions appear in which piles in terms of importance. Each card is given a number to facilitate this scoring process.

This Q-sort as a needs assessment process begins and ends with interviews with the participants (the individual SPEM staff). The statements that appear on the cards are gathered from brief preliminary interviews. The Q-sort itself is followed by an in-depth interview with each participant based on the Q-sort responses.

There are several advantages to the Q-sort needs assessment process. First, it allows physical handling of items; a physical ranking. It is therefore a more active process than the use of rating scales. Second, Q-sort requires the participant to think very carefully about ranking choices since the instructions are given one step at a time (e.g., What is the single most important problem?). Third, the Q-sort responses can be the springboard for intensive focused interviews.

There are, however, several distinct disadvantages to the Q-sort process. While the actual sorting process takes little time, when it is combined with the interviewing process this method of needs assessment can be a very time-consuming technique. Q-sort is not a process that can be used for great numbers of people. While the sorting process itself could be done with many people (given an appropriate number of card sets) the interviewing processes involved do not lend themselves to use with large numbers of people.

Q-sort was an interesting experience for the SPEM staff, not only because it offered an opportunity to express opinions on needs

and problems, but also because there was an opportunity to learn a new and interesting evaluative technique. The methodology of the technique was explained to the staff members and later translated and printed in Bahasa Indonesia.

Q-sort was useful to PENMAS, particularly as a basis for action on organizing the evaluation effort. The needs and problems regarding poor communication between administrative levels, lack of understanding of position responsibilities, the need for training and other factors were all presented in the Q-sort responses.

Other agencies and organizations might profit by refining the Q-sort technique, as it was used by PENMAS, and using it not only to assess staff needs but also to assess target group needs. Q-sort has begun to attract attention through its use in corporate training and development programs and could quite easily be adapted further for use with the participatory training techniques favored by nonformal education training programs.

The fifth and last "system-building" feature of the PENMAS evaluation effort concerns the training provided for the inexperienced SPEM staff. Although very basic in content, the style and

Participants as facilitators in evaluation training program

format of this training could be of particular interest to those persons wishing to implement similar programs. Mini-trainings were conducted on a regular basis for the SPEM staffs of each of the seven provincial PENMAS offices. These trainings, which ranged in dura-

tion from one to three days, were also attended by personnel from the other work units within the Balai PENMAS. The mini-trainings were usually conducted by the evaluation officers of PENMAS' national office and an evaluation specialist supplied by the University of Massachusetts. This two-member training team traveled a regular circuit to the provincial offices for more than a year during the second year of the project. In addition to the training provided, these visits presented the opportunity to offer the SPEM staff more informal advice as well as explanations of policies on evaluation developed at the national level.

The curriculum for the ongoing mini-trainings was essentially an introduction to evaluation concepts and techniques. Topics covered included definitions of evaluation, how to write general and specific objectives, preparation of criteria that are measurable, how to prepare a variety of basic data collection instruments, and a basic introduction to analytical techniques. Particular emphasis was placed on the development of concrete, measurable objectives for project activities. This was also an emphasis in the training of the training component staff and, therefore, a large percentage of provincial office staff were exposed to thinking and planning by objectives.

The style of the evaluation mini-trainings was always participatory. Discussion groups, role plays, critical incidents, brainstorming, nominal group techniques, and evaluation of everyday items (fruit, tea), and places (restaurants, food stands) helped to keep the SPEM staff in active roles.

One of the most important elements in these mini-trainings, however, and perhaps the element that requires the greatest emphasis in any future evaluation training efforts, was an attitude. That attitude, conveyed by the trainers informally as well as in training sessions, was that evaluation must and can be used as a helpful tool in project implementation. Evaluation does not have to be an inspection or a threat. The attitude of the evaluator, including each SPEM staff member, would have to be sympathetic and understanding in order for any evaluation activities to be a success. The attitude conveyed to the SPEM staff also emphasized trust. Sympathy, understanding, trust and a willingness to view evaluation as a helping activity were repeatedly stressed, indirectly and directly, as the keys to overcoming the "big fear" of evaluation. For future evaluators and planners, it is important to note that this campaign of attitude formation will not

produce instant results. One of the biggest problems of dealing with evaluation is the negative reaction produced by evaluation activities and by evaluators. Nevertheless, this attitude must be conveyed even though the results may appear gradually after many years.

Training, idea frameworks, an administrative structure, clear job descriptions for evaluation staff within that structure, and a means for defining the needs, problems and competencies of newly recruited evaluation staff have been key elements in building the PENMAS evaluation system. At the same time that there is a need for this type of building or framing activity, however, there is also a demand for evaluative information and instruments for collecting that information. How should data be collected? One of PENMAS' responses to this implementing question is of special interest.

Evaluation Implemented: Instrumentation

As noted earlier, PENMAS devised two major data collecting instruments. One was a lengthy questionnaire called PK10 which required detailed information about the Ten Basic Characteristics. The other instrument also asked for information related to the Ten Basic Characteristics but was much shorter and especially appropriate for the PENMAS NFE Project. This instrument was a mail-in post card.

The post card questionnaire is an especially appropriate instrument for a large-scale project, servicing a great number of participants and a wide geographical area. The post card questionnaire enabled peniliks to submit basic monitoring information on a monthly basis to the provincial PENMAS offices, which compiled all of the information on master tabulation sheets. During the first year of its use, the post card was sent to the national level PENMAS office as part of a tryout. At first, the post card data collection method had little success. Many fieldworkers were unsure of how to complete the questionnaire or at least certain parts of it. Many post cards were simply not returned despite the fact that the post cards were already stamped. This uncertain response prompted advisory and training sessions over a period of many months as to how the questions should be answered and when they should be returned. Gradually, the information began to flow more smoothly. Once confident that this method of information-gathering would work, the national level PENMAS office stopped receiving the post cards and allowed the provincial offices to receive them and record the information. During

1981 the provincial offices were also allowed to slightly change the post card's contents by dropping a few of the questions. These changes were not required but could be made if the provincial offices wished.

Although mail-in questionnaires as a research method have always had the major disadvantage of a low rate of return, PENMAS has, through much hard work and care, been able to achieve a high rate of return. Given a dependable mail system, this method could serve other projects well, particularly large projects. Successful implementation requires patience as well as repeated, careful training. A translation of the questions used on these cards is found in Figure 7.

Evaluation Experienced: Principles Deduced from Problems and Progress

It has been said many times we learn by experience. It has also been said, perhaps by someone who has worked with educational evaluation, that experience is "a hard teacher. She gives the test first and the lesson afterward."[6] PENMAS has had this type of experience with evaluation in the Nonformal Education Project; the organization has been tested by experience. The lessons have often come hard and the "test results" have been mixed. Some of these lessons have been described in the previous pages concerning instrumentation and building a structural framework for evaluation. These descriptions have been given in the hope that others will benefit from these experiences. There are, however, lessons in many other aspects of the PENMAS evaluation effort as well, and all of the lessons can be more easily summarized if certain principles for thought and action are extracted from them. The following, therefore, is a set of operational principles for planning and implementing evaluation in a large-scale educational project drawn from the PENMAS experience.

1. *Beginnings: If evaluation activities do not begin when the project begins or, better still, before the project begins, the chances of introducing useful, coherent evaluation will be substantially reduced.*

Time is of the essence in most large-scale projects but because of the other enormous pressures on evaluation, principally attitudinal

6. Levinson, Louis. *Webster's Unafraid Dictionary*. New York: Collier Books, 1967. p. 82.

pressures, the results of delay in beginning evaluation activities can break the evaluation effort right from the start. Experience in many projects, including this project, has shown that starting late with planning evaluation places almost intolerable pressures on evaluation staff. There is a constant struggle to play "catch up" and frequently the struggle is lost, particularly when the staff has little or no experience with evaluation. It is difficult to know exactly why evaluation efforts are so often late in beginning, but part of the blame may be placed on agencies, administrators and planners who begin projects by regarding evaluation as an activity of secondary importance and, therefore, of less urgency. Whatever the reason, the results are often painful. PENMAS has had this experience. The problem of late beginnings is most often felt during attempts to implement an early and usually required evaluation activity: the baseline study. Baseline studies are very important for measuring project progress, but even the simplest baseline study requires considerable time for the preparation of questions and instruments, preparation of a design, training for those who will administer or carry out the baseline, planning of logistics, and preparation of the means or methods for tabulating and analyzing the data. None of this is easy or can be done at the last minute. Frequently, the baseline study is abandoned in these circumstances or, as in the case of PENMAS, changed to a study which takes place periodically over time.

Evaluation and evaluators have an important role at the very beginning of the project in the program planning stage. Planning and evaluation should go hand in hand. Evaluation staff and consultants can help planners and administrators to focus and sharpen their objectives. This is beneficial for the managers and the evaluators. If this key moment is allowed to slip away, not only will an opportunity be lost to produce a truly operational project implementation document, but evaluation staff will be left with trying to cope with measuring soft, vague, and largely unmeasurable objectives for the rest of the project. The process of preparing such an implementation document should give management a clear conception of what the project intends to accomplish.

2. *Defining Success: If no one or only a few persons in a project understand exactly where a project is going, there is a very good chance that evaluation will go nowhere and the project will go somewhere (usually somewhere else).*

In order for evaluation to be useful, there is a strong need for management, evaluators, and project staff in general to be able to answer the following question: "What will success look like at the end of the project as well as at various points along the way?" It is very difficult to carry out formative or summative evaluation if there is a lack of understanding about the meaning of success under particular project circumstances. Monitoring information can be collected ad infinitum, but even this simple type of quantitative data will mean little if someone cannot review it and state decisively that progress is being made towards a definite goal.

Success, however, must also be defined not only in numbers of "bodies" present in learning groups or numbers of booklets distributed, but also in terms of the quality of programs and training presented and the quality of the impact made on a population. What is "good"? What is a "good" learning group? What are the qualities of a "good" training program? How do we know if someone is literate? How do we know if the "bodies" really have learned something and can use that something? Has a program or project made a difference, preferably positive, in the thinking and actions of those who participated in it?

We will know that we have been successful *if* . . .?

Defining success need not destroy the participatory nature of many nonformal education efforts nor will the prudent use of objectives. Competency-based nonformal education is quite compatible with participation. Competencies desired (defining success) can be outlined while allowing participants to choose their learning directions. Even open-ended learning groups can develop their specific objectives in a manner in which the degree of their success can be measured. The reluctance of nonformal education programs to define what success will mean by arguing that doing so will constrain participation has made evaluation of these programs extremely difficult. Evaluators are required, especially by international lending agencies, to show evidence of results, but those who implement participatory nonformal education programs cry "foul," which is understandable. Evaluation and the evaluators are caught up in the middle of this argument; evaluation is where "top down" and "bottom up" approaches to nonformal education frequently conflict. The conflict can be avoided, however, by carefully defining the nature of success while allowing participatory approaches toward develop-

ment to take place. It must be accomplished as planners and funders thinking of future projects increasingly cast a critical eye towards the presence or absence of evidence of success of past nonformal education projects.

3. *Expectations and Conflicts of Interest of Evaluation Staff: If evaluation staff begin a project with no experience, no training, and no job specifications and are, at the same time, supposed to be receiving training and producing data for decision makers almost immediately, the outcome can be confusion and lowered morale. Solution: lower expectations.*

This problem has already been described here. It is not a problem for evaluation staff alone, of course, since staff members of other project components who are inexperienced face a similar tension. Nevertheless, an evaluation staff has several strikes against it even before it does something simply because it is associated with evaluation and with all of the connotations of threat and fear that evaluation unfortunately carries. A young, inexperienced evaluation staff requires a chance to learn and prove itself. It needs time but has little of it. There are few solutions to this problem. One solution is for managers and planners to understand this problem and compensate for it. One way to compensate is to lower expectations for the amount of data required until evaluation personnel have the capabilities needed to cope with most aspects of their jobs. Another solution is to combine the evaluation training experience with the gathering of a very small amount of elementary data for project purposes on a regular basis. It also may be useful to dispense with the title "evaluation" for this component as a means to reduce the threat of evaluation. Indeed, most evaluative processes can be called something else and still achieve evaluative purposes. In this day of management information systems and information processing, it would seem wise to have, instead of an evaluation unit, an "information processing unit" or a "feedback unit" in a nonformal education project. A shift in terminology would lend itself nicely to one of the principal functions of evaluation, the gathering of information for decision making.

4. *Gradualism Pays: Especially in a large-scale project, do not attempt to do everything all at once in evaluation. It is impossible and it is frustrating. Establish a "pipeline" for evaluative communication and then try to get a small amount of information flowing regularly through that communication pipeline.*

A fatal mistake, especially for evaluation, is to try to do too much all at once. An inexperienced evaluation staff and the project as a whole will probably "choke" if evaluation plans are too grandiose and the amount of data coming in is overwhelming. Try to implement an evaluation system gradually, step by step. There is a season for all evaluation tasks. Complex formulas should be left for a mature and experienced evaluation staff. Concentrate on making simple information flow about project inputs and outputs (a *few* of them) and gradually begin to include "quality" information on how well the project is doing.

5. *The Inferiority Complex: If evaluation staff are treated as inferior to other project staff by management, if salaries paid to these staff are lower than for other components, if there is no specific, separate budget for evaluation activities, then there is every likelihood that evaluation will begin and continue to be inferior in quality.*

This principle is self-explanatory for the most part; and its solutions are embedded in the problem itself. Part of the problem may be that evaluation is often regarded as a service activity as opposed to a main activity such as materials development or training. Evaluation is a service activity: a service to a project, to an organization, to management, and to components within a project. It can be a highly important service. Evaluation should be viewed as a service but service in its most positive sense. Being a service and maintaining an attitude of inferiority towards evaluation are two entirely different things.

6. *On Data Collection: If you can't use it, don't collect it.*

One of the most frequent sights in large-scale projects are large-scale piles of completed questionnaires lying unprocessed in many a dark corner. They are reminders of one of the biggest problems in evaluation, the collection of information which can't be used. The information may be unusable for a variety of reasons. A prime reason may be that no one has ever asked the question, Why do we need this? before planning to collect it. That question must be asked by future evaluators and managers. A second reason may be poor planning; no one has stopped to ask who will analyze the collected information. The result is piles of data growing old and unresponsive to project needs because there are inadequate numbers of persons assigned to finding out what it means. A vast amount of data usually means a vast

amount of work, which is another reason to limit the amount of data collected. Evaluators and administrators must learn to be tough and selective in the kinds of data collected or the evaluation staff and the project will drown in a morass of trivia.

7. *Quantitativitis: This is a disease that is particularly prevalent in large projects. The principle is to mix the types of data collected by including qualitative data as well. Do not give in to the "magic" of a purely quantitative approach to evaluation for in that magic there is also a tendency to ignore the in-depth information available only through qualitative approaches.*

The "matter of scale" strikes home in this principle with a vengeance. It is very difficult to escape from the "numbers syndrome" of a large-scale project. It is easier to collect numbers in such projects. There is a certain romance about large numbers of inputs and outputs. They look impressive. It is, however, possible to selectively gather qualitative information, especially on a sampling basis, through interviews, observation, photography and case studies.

8. *Reinventing the Wheel and Other Basics: Try to make use of all available statistics and information from other agencies (e.g., Bureau of the Census, Home Affairs Office, private agencies, etc.).*

Perhaps it is a matter of pride or political jealousy, but there often seems to be a great reluctance on the part of many organizations to use information already gathered by other agencies. This can radically slow the work of an evaluation component in an educational project. If statistics have been gathered on the number of illiterates in a certain area, then it is important to find out that information and the definition of literacy used. Census data can contain valuable information on wealth, health and education of a population, and evaluation staff must learn to obtain and make use of this data for their own purposes.

9. *The Problem of Problems: A large-scale education project will always have problems. The problem for evaluation occurs when project planners and administrators refuse to recognize problems or try to cover the problems. The principle is that for evaluation to work openly, problems have to be identified so that steps can be taken to correct them. If this principle is ignored then evaluation will be ignored.*

The problem of problems affects many educational projects, and it is natural and understandable. No one likes to see a problem identified for fear that it will reflect badly on a particular person or persons. However, if problems are ignored or covered over, rather than discussed regularly in a noncritical manner, evaluation efforts become virtually worthless. This is a problem of communication and trust, and it is a problem for management.

10. *The Long-Range Point of View and its Value: Try to keep a long-range perspective on evaluation activities in a nonformal education project. Short-range expectations may be too large and too overwhelming.*

Evaluation in nonformal education projects requires a large tolerance for ambiguity and a perspective that is long-range and development oriented. It is impossible to change ingrained attitudes towards evaluation in a few months, a year or even a few years. Projects frequently force the evaluation efforts and attitudes faster than they can realistically develop. Without a realistic view of what can be accomplished, both in terms of attitude change and evaluative activities, the work of evaluation staff becomes deadening and the expectations of planners and administrators overwhelming and overinflated.

These ten principles for evaluation, thought, and action are only part of the learning experience in evaluation to come out of the PENMAS project. PENMAS has made excellent progress in its evaluation efforts, and those efforts will continue to grow in quality and sophistication. It is a learning experience which offers many innovative, positive examples to other organizations of what can be done given time, work, and talent.

FIGURE 6

KEY INDICATORS FOR PENMAS NFE PROJECT

I. **PROJECT CLIENTELE**
- A. Number of fieldworkers
- B. Number of Learning Activity Centers (SKB)
- C. Number of learning groups
- D. Number of participants in learning groups
- E. Number of other professional staff (SKB, kabupaten, Balai PENMAS) compared with appraisal report staffing requirements.

II. **TRAINING**
- A. Number of PENMAS fieldworkers
- B. Number of kabupaten and SKB staff trained annually
- C. Number of Balai PENMAS staff trained annually

III. **LEARNING MATERIALS**
- A. Number of learning materials developed
  1. Printed
  2. Slides
  3. Tapes
  4. Posters
  5. Leaflets
- B. Number of learning materials produced
  1. Printed
  2. Slides
  3. Tapes
  4. Posters
  5. Training manuals
  6. Leaflets
- C. Number of learning materials distributed
  1. Printed
  2. Slides
  3. Tapes
  4. Posters
  5. Training manuals
  6. Leaflets

IV. **PROGRAM DEVELOPMENT**
- A. Learning funds
  1. Total amount of money distributed
  2. Number of learning groups receiving funds
- B. Distribution (Number of) participants by different kinds of courses
  1. Basic education
     a. Basic education
     b. Family life planning
  2. Skill courses
     a. Domestic skills (sewing for men and women, haircutting, etc.)
     b. Office administration skills (bookkeeping, stenography, etc.)
     c. Technical skills (radio and TV repair, woodworking, etc.)
     d. Language skills (English, Dutch, French, German)

V. **TECHNICAL ASSISTANCE/FELLOWSHIPS**
- A. Number of persons trained by area of study
- B. Number of man-months of fellowships by area of study

VI. **PROCUREMENT**
- A. Equipment and vehicles for fieldworkers
  - 1. Number of pieces on order (by province)
  - 2. Number of pieces on site (by province)
    - a. Typewriters
    - b. Duplicating machines
    - c. Cupboards
    - d. AVA non-electrics
  - 3. Motorcycles
- B. Equipment and vehicles for SKBs
  - 1. Number of pieces on order (by province)
  - 2. Number of pieces on site (by province)
    - a. Portable generators
    - b. Radio cassette recorders
    - c. Slide projectors
    - d. Projector screens
    - e. Slide projectors with built-in screens
    - f. Sound film projectors
    - g. Typewriters
    - h. Calculators
    - i. Duplicating machines
    - j. Cupboards
    - k. Vocational training equipment
    - l. AVA workshop tools
    - m. AVA non-electrical sets
    - n Four-wheel drive vehicles

VII. **CIVIL WORKS**
- A. Number of new Balai PENMAS completed
- B. Percentage of construction time (months) for new centers completed (on centers not yet completed)
  - 1. South Suluwesi
  - 2. North Sumatra
  - 3. Central Java
  - 4. East Java
- C. Number of Balai PENMAS renovated
- D. Percentage of construction (months) completed on centers not yet renovated.
  - 1. Jakarta (Kebun Jeruk)
  - 2. Lembang
- E. Number of trainees served before and after construction (per month) at each center
  - 1. At renovated centers
  - 2. At new centers

VIII. **EVALUATION**

A. Formative Evaluation System data collection procedures are:
   1. Designed
   2. Constructed
   3. Implemented
   4. Producing data on
      a. Outcomes (Ten Basic Learning Characteristics)
      b. Outputs (Key Indicators)
      c. Process data

B. Summative Evaluation System data collection procedures are:
   1. Designed
   2. Constructed
   3. Implemented

C. Percentages of units reporting data sets by scheduled dates
   1. Data set categories
      a. Outcomes (Ten Basic Learning Characteristics)
      b. Outputs (Key Indicators)
      c. Process data
   2. Units/levels/data flow
      a. National to World Bank
      b. Provincial to national
      c. Kabupaten to provincial
      d. Kecamatan to kabupaten

D. Feedback of data sets to appropriate levels by scheduled dates
   1. Outcomes (Ten Basic Learning Characteristics)
   2. Outputs (Key Indicators)
   3. Process data

E. Number of evaluation personnel receiving training annually by number of days of training

IX. **MANAGEMENT**

Key indicators on management process may be seen among indicators already noted among other categories. These key indicators will be repeated here. Numbers beside these indicators will refer to the category and specific sub-headings where these indicators appear in the preceding key indicator list.

A. Organizational Staffing

Numbers of people (staff) employed at different levels of the PENMAS system, as compared with appraisal requirements (Page 15 of the appraisal document)
   1. BPM
   2. Kabupaten
   3. SKB
   4. Kecamatan

B. Other measures of management development
   1. Training accomplished (numbers of people—See II: A, B, C)
   2. Number of SKBs established and in operation (I: B)
   3. Numbers of learning groups (I: C)
   4. Aggregated amount of learning materials distributed (III: C)
   5. Total amount of money distributed (learning funds) (IV: A, 1)

FIGURE 7
PENMAS POST CARD QUESTIONNAIRE

1. Learning group participants who have joined the learning program (M _____, F _____).
2. Learning Resources that are ready to teach _____ persons.
3. Scarce learning resources that are needed: _____.
4. Learning facilitators (pamong) that exist: _____.
5. Learning program activities that exist: _____.
6. Program activities operating: _____ units.
7. Program activities completed: _____ units.
8. Program activities never completed: _____.
9. Kinds of learning yeast used: _____ types.
10. Learning funds from local government: _____ rupiah.
11. Learning funds from community: _____ rupiah.
12. Places being used for studying: _____ units.
13. Packet A1–A10 that exist: _____ copies.
14. Learning materials (not printed) that exist: _____ types.
15. Learning groups that receive learning funds: _____ units.
16. Learning groups that have already completed learning activities: _____.
17. Group participants who have already completed their studies: _____.
18. Participants self-employed in new jobs after completing the program: _____.
19. Participants who, after having completed the program, are employed by other people: _____.
20. Villages that already possess work groups: _____.
21. Villages that have already been supervised: _____ (villages).
22. Meetings with village leaders: _____ times.
23. Meetings with learning resources and learning facilitators: _____.
24. Meetings with learning group participants: _____.
25. Supervision from the kabupaten office of PENMAS: _____ times.
26. Supervision from Balai PENMAS: _____ times.
27. Supervision from the central PENMAS office: _____.
28. Observation on other occasions: _____ times.

29. Learning group participants that have finished learning activities in "Basic Knowledge": _____ people.
30. Learning group participants that have finished PKK (Family Life Education) activities; _____ people.

PENMAS Paket A literacy class

SUMMATIVE EVALUATION

GUIDING PRINCIPLES

Summative Evaluation

1. Effective evaluation of large-scale nonformal education projects requires a combination of quantitative and qualitative data. Use of resident observers who can record a full life cycle of a learning activity will provide great insight into the strengths and weaknesses of a program.
2. Evaluation of nonformal education projects requires methods which are flexible and suited to the reality of the situation. Most nonformal education takes place in loosely structured situations where systematic data collection will require time and patience.
3. Summative evaluations should be designed so that the outcomes can inform decision making when they are part of an on-going project. The management of PENMAS was being influenced by some of the results of the evaluation even before the final report was completed.
4. As part of designing an evaluation, the evaluators need to assess the institution's capacity and commitment to the implementation of the evaluation. Summative evaluation should be planned as early in the project development process as possible. Successful evaluation cannot take place without the active support and understanding of project leaders from the very beginning.

This chapter is extracted from a lengthy summative evaluation report[1] which was prepared by the Research Section of the Ministry of Education and Culture. The report was based on field data collected over a period of several years. The analysis of the data and the preparation of the final report was completed in January, 1982, approximately six months before the completion of the technical assistance component of the project. The first part of the chapter summarizes the evaluation design and methodology used to collect data at the village level. The second part presents the report's policy recommendations for various components of the project.

The purpose of the summative evaluation was to assess the degree to which PENMAS had met its objectives under the project and to identify its strengths and weaknesses. To meet this goal and to provide support for future policy decisions, both reliable empirical data and sensitive contextual data about what was happening in the villages was needed. The issues investigated by the evaluation team fall into four main categories. These generally correspond to the ten basic learning characteristics of PENMAS which are used to measure the success of the learning programs at the village level.

The Needs of the Target Population. What are the cognitive and the attitudinal needs of the target population, and to what extent have these needs been met?

Access of the Target Population. To what extent are individuals from the target population for whom the program is intended actually finding their way into the PENMAS learning groups?

Program Operation. Program operation was evaluated on two levels: in the villages, and above the village level. Operation at the village level includes issues such as the level of penilik performance, the extent of learning fund distribution, the success in recruiting learners, and the effectiveness of the system of volunteer tutors and facilitators.

Operation above the village level analyzed such issues as: the success of the various administrative levels in meeting their construction and procurement schedules; the effectiveness of the newly-created systems for developing NFE materials; the level of produc-

1. Bock, C., Bock, J., Hartono, H., Jiyono, Pakpahan, E., Shaeffer, S., Sinaga, T. *Final Report on the Mid-Term Evaluation of the PENMAS Non-Formal Education Project.* Jakarta: Office of Educational and Cultural Research and Development, Ministry of Education and Culture, 1981.

tion and distribution of the materials, the effectiveness of the in-service and the pre-service training; and the extent to which an effective, ongoing formative evaluation process had been established.

The Impact of PENMAS Programs. To what extent has the program affected the lives of program participants and of their villages? In order to identify the socio-economic characteristics of the participants, it was necessary to collect systematic data about the socio-economic structure of the village. Such data would enable the evaluators to explore causal links between those who were reached directly by PENMAS programs and the subsequent effect on the villages. To address these issues the evaluation made use of a longitudinal design which employed a variety of data collection methods. The goal of the process was not only to describe what was happening, but to be able to explain why it was happening.

EVALUATION DESIGN OF THE PENMAS PROGRAM AT THE VILLAGE LEVEL

It is very difficult, if not impossible, to apply rigid research standards to a nonformal education program in a rural Indonesian village. Villagers have no prior experience with surveys and probably have never officially been asked their opinion.

Furthermore, evaluating a nonformal education program cannot be accomplished in the same way that one might evaluate formal schooling. Learning groups may begin at any week or month and do not last the same period of time. In fact, a learning group may start, stop because of harvest, and begin again. These, as well as other factors, necessitated a less rigid and more flexible approach to this evaluation.

A longitudinal design was used to observe the process of the formation of the learning groups at the time they started and, in many cases, at the time the learning groups dissolved. This approach allowed the evaluators to (1) follow the learners through the learning experience and gather information regarding their reactions to the program, (2) follow the drop-outs and learn the reason why they did not complete the learning group, and (3) follow the learners until the end of the evaluation period to assess the impact of PENMAS programs on learners' lives and the village as a whole.

The evaluation team felt that a multi-method approach was also appropriate for this type of research. The validity of a great deal of quantitative data gathered from illiterate or semiliterate villagers is

often highly questionable. On the other hand, depending entirely upon observational data has very limited reliability. As a result it was decided to have observers live in sample villages and collect observational data. In addition, quantitative data were collected through interviews with learners, peniliks, and others at various times during the longitudinal study.

Twenty-four kecamatans were chosen for this study. One observer was assigned to one or two of the villages in each kecamatan to live and to systematically observe the PENMAS operation there. He or she lived in a village from November 1979 until August 1981 collecting various types of data and periodically sending it to Jakarta. In each of the sample villages, the observers collected two types of data. They collected qualitative data on selected learning groups which were studied in-depth. In addition, they collected quantitative data from all the learning groups which were formed in the 35 sample villages.

For the quantitative data, the observer first collected information on a random sample of 30 household heads in the village. This data was used as a base for comparing the socio-economic levels of the PENMAS learners with other village members. During the first few months, the observer looked for three learning groups to observe that were just starting. He or she also chose ten learners from each of the learning groups to interview in depth. These selected learners were interviewed three times: Time 1 — at the formation of the learning group; Time 2 — after the learning group was finished; and Time 3 — toward the end of this evaluation. Peniliks and tutors were similarly interviewed three times.

At the same time observers collected ethnographic data about the village in which they lived and observational data concerning the various aspects of the process of the PENMAS operation at the village level.

Sampling Procedures — Kecamatans and Villages

The following factors were considered in determining the sample kecamatans:

1. The sample should represent the target population in the six provinces.
2. The lowest level, full-time PENMAS personnel are the peniliks who work at the kecamatan level; thus the targets set for the penilik represent the PENMAS targets for that kecamatan.

3. The villages within the kecamatan do not vary much in the characteristics of their population and the geographical setting.
4. The success of the PENMAS program was assumed to vary between geographical areas.
5. The sample taken should be manageable in terms of money and time.

Since PENMAS believes that the success of its program is significantly influenced by geographical areas and has therefore classified each kecamatan into one of four kinds of ecological zones—agricultural plains area, urban area, coastal area, and hill area, the sampling procedure took this into consideration. It was decided to take one kecamatan from every ecological zone from each province except Jakarta, where all kecamatans are considered as urban areas; two kecamatans were taken from Jakarta. Thus, a total of 22 kecamatans were identified by ecological zone and province.

The evaluation team also believed that the impact at the village level might be affected by the presence of either a *micropu* (Micro Mobile Printing Unit) or an SKB; therefore, it was decided to sample one kecamatan in West Java and one from East Java which were covered by the *micropu*. In addition, two kecamatans that had SKBs were added to the sample. Thus, a total of 26 kecamatans were planned for the survey. However, one observer in one kecamatan dropped out soon after the survey began, and one further kecamatan was dropped because an observer could not be found. Therefore, the sample contains data from a total of 24 kecamatans.

The sample villages from each kecamatan were selected using the following criteria:

1. There was no other large educational program or project from another institution, such as UNICEF, in the kecamatan.
2. There was no big government project in the kecamatan which might affect the lives of the citizens, e.g., water supply, irrigation projects.
3. There had been no big natural disaster recently.
4. There would not likely be any big natural disaster during the evaluation period.
5. The kecamatan was not too difficult to reach for either the penilik or the evaluation team.

6. The kecamatan should have a PENMAS penilik who had not been recently appointed.

In order to insure that the entire kecamatan would be represented by the sample villages, and to ensure that the observers in each kecamatan would have a sufficient number of learning groups to observe, some observers in some kecamatans were assigned two villages to cover. One village was selected from the kecamatans that had less than 10 villages, and two villages were selected from those kecamatans that had more than 10 villages with the exception of one kecamatan in Central Java which had more than 10 villages; it was too difficult to work in two villages there because of the roughness of the terrain. In all, 35 villages were selected from the 24 kecamatans.

The sampling of villages was not made on a random basis because PENMAS activities were not carried out uniformly in all the villages in a kecamatan. For example, in several provinces the penilik serves only some villages on a priority basis rather than all the villages in the kecamatan. Thus, in choosing the sample villages within each kecamatan, each observer asked the penilik to name the villages which would be the focus of his programs during the evaluation. From this list, the observer selected a sample village(s) randomly. Villages in each ecological zone in each province were selected which fell below the median of per capita income for all villages in those provinces.

To collect the contextual data for explanatory purposes concerning the population in the village, 30 household heads were chosen randomly from the sample village(s) in each kecamatan and interviewed. Thus, 720 cases were collected from the 24 sample kecamatans.

Random Sample of Learning Groups

Each of the 24 observers had to collect quantitative data in one or two sample villages. In addition, each observer had to select, on the average, three sample learning groups (with an average of 30 total learners) to study in depth as part of the qualitative methodology.

In selecting the sample learning groups and the sample learners in each kecamatan, three basic factors were considered.

1. The number of learning groups and learners must be manageable for the individual observers.
2. The learning groups and learners must, as much as possible, not be biased.

3. The number of learning groups and learners selected as a sample must not be too small to represent the learning groups established and the learners recruited in the village during the evaluation.

Using these factors the following rules were applied in the selection of the sample learning groups and learners in the villages.

1. In each sample kecamatan, at least one group from each of the three major types of learning groups, i.e., Basic Education, Family Life Education, and Vocational Skill which were established in the sample village(s) during the evaluation were included in the sample.

2. The learning groups selected were established after November 1979 and before May 1981. This strategy allowed enough time between the evaluation of the learning groups at Time 1, when the learning group started, and at Time 2, when the learning group finished.

3. If a learning group chosen by an observer completed the course before the end of the evaluation period, then another group of the same type was chosen to replace it.

4. If the sample learning group had more than ten learners, then ten learners were selected randomly. If the number of learners in the group was less than ten, then all the learners were studied.

Observer interviewing learning group members

The total number of learners and learning groups from the 35 sample villages consisted of 308 learners from 32 Basic Education

learning groups, 295 learners from 30 Family Life Education learning groups and 156 learners from 16 Vocation Skills learning groups. A summary of the numbers at different times is presented in Table 8.

The sampling procedures affected the representativeness of the sample to some degree. However, the evaluators felt that the findings regarding the general phenomena of the learning groups and learners would be generalizable to some degree to the population as a whole. The results of this type of sampling procedure were more generalizable in their qualitative than in their quantitative aspects. Thus, phenomena such as the reasons why learning groups are formed and break up had greater generalizability the universe of PENMAS programs than did quantitative data, such as the number of learners who joined a particular type of learning group.

TABLE 8

NUMBER OF LEARNERS OBSERVED AT TIME 1, TIME 2 AND TIME 3

Time	Type of Learning Groups	Number of Learners Observed			No. of Learners Not Observed
		Finish	Dropouts	Total	
Time 1	Basic Education			308	
	Family Life Education			295	
	Voc. Skill Education			156	
	TOTAL			759	
Time 2	Basic Education	140	130	270	
	Family Life Education	227	66	293	
	Voc. Skill Education	113	33	146	
	TOTAL	480	229	709	50
Time 3	Basic Education	150	132	282	
	Family Life Education	178	56	234	
	Voc. Skill Education	101	26	127	
	TOTAL	429	214	643	116

Selection and Training of Observers

As planned in the design, the data in the sample villages was collected by the observers. One observer collected the data in the sample villages within each kecamatan from the beginning to the end of the mid-term evaluation. The observers were selected by the following criteria:

- Finished upper secondary school or higher.
- Age twenty to twenty-five years old.
- Lived in a related sample kecamatan.
- Had no relationship with penilik (PENMAS staff).
- Willingness to do the evaluation from the beginning to the end of the evaluation in specified kecamatan.
- Willingness to stay in the kecamatan throughout the evaluation period.
- Competent to do the evaluation as judged by the evaluation team.

The penilik in every sample kecamatan was asked to choose the three best candidates who met the above criteria. The three candidates from each kecamatan in each province were then sent to the Balai PENMAS office in the province for selection. The selection of candidates was made by unstructured interviews and by using written tests to determine their ability in writing composition and to measure their aptitude. The best candidate from each kecamatan was selected based on the test scores. If the best candidate did not meet the six criteria, then, the second was chosen. Very few of the first selected candidates did not meet the six criteria. Among the 26 originally planned sample kecamatans, there was only one in North Sumatra in which there was no candidate who met the criteria. Thus, that kecamatan was dropped from the sample.

Training

The selected observers were trained in Bandung for three weeks during October and November, 1979, in methods of data collection by the evaluation team and one foreign consultant. The training included theory and practice of methods of collecting qualitative and quantitative data. After training, they returned to their own kecamatans and started to collect data at the beginning of December 1979.

The Observer as Describer

One of the difficult tasks assigned to the observers was to *describe* the area in which they had lived most of their lives—to see it

through different eyes and describe it in considerable and sensitive detail. To secondary school graduates not familiar with descriptive writing, the challenge to observe, ask, probe, record and then explain and summarize was not easy. In part to gather contextual data for the evaluation, to enable them to put their own opinions and conclusions in a well-understood context, and to learn inquiry, the observers were required to describe the history of their regions since 1940 and the changes in social, political and economic life that had occurred in the past 30 years. They were required to describe conditions of health and nutrition, the environment, clothing and housing, religious beliefs, the role of women, and the quality of education. They were asked to describe PENMAS activities, local development needs, and specific learning group requirements. As learning groups were established, they were asked to observe and describe how they were formed, planned, and conducted, both in and out of the classroom. At the end of the 18-month observation, they again described their area's development, focusing upon any evidence of change and summarized their general impressions regarding the operations and impact of the PENMAS program.

Monitoring of the Observers

A three-week training program was too short to train the observers to conduct this evaluation. To maintain contact, to provide assistance and to give new assignments, meetings between the observers and members of the evaluation team were held in the Balai PENMAS in their respective provinces about every four months. These meetings took two days. Three days after the meeting, the evaluation team visited one of the sample kecamatans in the province as a motivational technique. The evaluation team also encouraged the penilik and village leaders, tutors, facilitators and the learners in the sample villages to cooperate with the observer. During this visit the team also tried to get an impression of PENMAS programs by visiting and observing learning groups and having informal interviews with peniliks, local government officials, village leaders, tutors, facilitators, and learners. In addition to maintaining contact with observers through meetings or visits, the evaluation team also communicated regularly with the observers through letters.

Instrumentation

To answer the research questions stated in the purpose of this evaluation, qualitative and quantitative instruments were designed.

Many instruments had a combination of both quantitative and qualitative components. The observational instruments were designed to collect two kinds of information: ethnographic information about the village, and observations of the PENMAS operation in the village. The PENMAS observations recorded information about the formation of the learning groups, how they were conducted, why some broke up and others did not, and how the observers perceived the impact of PENMAS on individuals and on the village as a whole. The instruments used for interviewing various individuals in the villages are briefly described below.

Instruments for the Household Heads

An instrument was used which enabled the interviewer:

a. To record the individual's province, kecamatan, village and other information for identification. This instrument also included items related to the conditions of the interview, necessity for translation, and the interviewee's understanding of the questions.

b. To record the basic demographic information about the person, such as their age, sex, marital status, years of education, and occupation.

c. To discover the degree of literacy of the individual, both in the regional language and in Bahasa Indonesia.

d. To record many conditions of the economic status of the respondent's family. These included such items as the value of the house, the occupation which produced the main source of income for the family, the main source of light for the house, and various household possessions. It was necessary to collect socio-economic indicators of the household in order to have comparable variables across various age groups, and males and females.

e. To measure attitudes, such as modernity, occupational and educational aspirations, attitudes regarding health care and others; and to ascertain the extent to which individuals were aware of the resources in the village, such as other government agencies, which were available to them. The instrument also measured the extent of their use of these resources.

Instruments for the Learners

a. The 5 types of instruments described for the random sample of household heads were given to the learners.

b. An instrument was given to the learner at the time of the formation of the learning group that asked questions such as, how were you recruited? and why did you join the group?

c. An instrument was given to the learner at the end of the learning group to determine to what extent the learners had accomplished what they had hoped to learn and their opinions of various aspects of how the learning group was conducted.

d. The learners who dropped out were asked a different set of questions regarding their reasons for dropping out and the kind of group that would best meet their needs.

e. All of the learners were interviewed at the end of the evaluation to see if they had experienced any changes in their own lives or perceived any changes in the village as a result of the PENMAS program.

Data collection at vocational skills training site

Instruments for the Penilik and Tutors

a. The first three types listed under the random sample of household heads were given to peniliks and tutors.

b. An instrument was given to the peniliks and tutors which asked them to describe the recruitment of learners and other aspects of the operation of PENMAS at the village level.

c. The instrument also asked the peniliks and tutors their perception of the problems pertaining to forming and sustaining learning groups and the impact of the PENMAS program.

Other instruments were designed to gather statistical information about the village such as population size, illiteracy and various measures of development.

The observational data provided three points of view regarding the operation of PENMAS at the village level by comparing the views of the learners, the peniliks and the tutors. The qualitative data was useful in helping to explain some of the quantitative findings. In this research these two types of data complemented each other; thereby, adding confidence to the findings.

The evaluation team considered increasing the reliability of the measurement by eliminating the qualitative observers and increasing the number of sample villages; however, they decided it was more important to obtain the rich contextual data by using observers and, therefore, learn something about the process of change and the reasons why it did or did not occur. The evaluation team also considered increasing the validity by selecting only a very few villages and studying them in great depth using only qualitative ethnographic methods. But then the findings would have had little or no generalizability to the PENMAS project as a whole. Thus, the decision to utilize a multi-method design was a compromise dictated by the field conditions and cost constraints.

Before the instruments were used, they were tried and revised in Bandung, the site of the observer training. The testing of the instruments formed a part of the training for the observers. The instruments were tested with learners in PENMAS learning groups in a village.

Data Analysis

The possibilities for analyzing the qualitative and quantitative data collected for this research were numerous. However, due to time constraints this initial report focussed on the broad issues, for the most part, rather than exploring the intricacies of the data. Since the main purpose of this evaluation was for policy decisions, it was the intention of the evaluation team to keep the computer analysis simple. Therefore, for the most part, simple frequency distributions were used either with a sample as a whole or broken down into such categories as type of learning groups, sex, or age categories.

In analyzing the interview data, there were basically two types of instrument items to code for computer analysis. One type was the multiple-choice item in which the categories of responses were

already listed. Another type was the open-ended question in which the observer wrote down the response given by the respondent. Both of these types were coded for computer analysis. With the open-ended type, sub-samples of learner instruments, representing all seven provinces, were selected to construct coding frames of the various responses. These responses were categorized and then used as coding schemes for the entire sample of responses.

The random sample of household heads was used as baseline data in order to have a model of the socio-economic structure and other demographic information with which to compare the PENMAS learners. One of the most important aspects of this part of the analysis was to analyze the distributions of learner responses as to their perceptions of the PENMAS program. The perception of the learners were also compared with those of the peniliks and the tutors.

Policy Recommendations

One of the strongest points of PENMAS, that it is a dynamic organization, makes it difficult to offer policy suggestions, because PENMAS is in a continual process of adaptation and change. When problems are identified and possible solutions suggested, PENMAS responds and tries to improve. Thus, the evaluation team recognizes that some of these policy suggestions may be in the process of implementation by the time this report is distributed.

Overall PENMAS Management

The results of the evaluation indicated a need for PENMAS to do more systematic and forward planning. To date, policy seemed frequently to result from reactive responses to day to day crises. The continual emergency of immediate events tended to dictate policy. There is a strong need for a management system, from the national to kecamatan level, that can handle day to day crises without being diverted from planned project goals and activities.

At least part of the problem was due to the fact that project personnel are frequently given responsibility for implementing key project tasks before they have been adequately trained and thus do not have sufficient competencies to perform these tasks. This tended to hurt individual morale, overall project morale and project performance. It also promoted a condition of general staff unreadiness that resulted in a tendency to perform the job ritually with no substantive expertise.

The evaluation team felt that the short-term, one-time only kind of training, often provided through technical consulting contracts, was not sufficient to produce the necessary staff readiness. This type of training requires follow-up and continuous, on-the-job training. Ultimately, a long-term, integrated staff development and training strategy is needed. It is important for PENMAS not to move forward too quickly without first developing a solid base of competent staff.

It is the opinion of the evaluation team that PENMAS tried to do too much and, therefore, did not concentrate its efforts where there was a solid base of competence. Too many project personnel had too many jobs to do. This often resulted in none of the jobs being performed with real expertise.

There appeared to be a conflict between the participatory ideology which guides PENMAS and the more authoritarian bureaucratic structure under which PENMAS operates. The presence of this conflict was seen, at times, to inhibit decision making. There is no simple solution to this conflict. One concrete example is in the implementation of national programs at the local level. Peniliks have the authority to make certain changes in the fixed curricula to meet local conditions; some do this. However, there was conflict between the administrative reporting procedures and the realities of implementation. This led the penilik to report according to fixed procedures rather than accurately report the programs which had actually been implemented. Since programs need the flexiblity to meet local conditions, it is better to implement programs according to need and encourage them to report the facts accurately.

Given the policy commitment of PENMAS to expand the current size of the project, there is a need to conduct more pilot testing of innovations such as, learning materials, learning fund policy, and evaluation procedures, in limited areas. The entire project area is too large for effective pilot testing because mistakes are too costly, which tends to discourage pilot testing altogether.

A valuable model to experiment with is the Yogyakarta example of concentrating initial resources on relatively few demonstration villages. Many of the innovations tried over the last few years of the project might have been more cost effective if they had initially focused on fewer provinces and fewer villages within the provinces. Future expansion should be based upon well-designed initial pilot testing.

There was no general, workable system for assessing the needs of the village. The evaluation team felt the evaluation did not do an adequate job of determining the extent to which PENMAS met the needs of the village. This was due, for the most part, to the fact that there were no reliable literacy statistics available at the village level, and that at the time of the evaluation, PENMAS did not have a dependable method for assessing needs at the village level.

Several of the observers felt that PENMAS needed a means to discuss with community groups the kinds of learning groups needed. The decision-making process should include community members' participation, not only the penilik and local government officials.

This approach requires a systematic analysis of needs by using a house to house census or meetings with the target groups. PENMAS could thus establish closer relations with the community and become more sensitive to the needs of the target population. Furthermore, PENMAS needs to consider ways to more effectively sell itself at the village level by explaining what it does and what it means until PENMAS becomes a household word like "family planning" has succeeded in becoming.

A single method approach is not sufficient to determine the needs of the target population. Market research should be conducted in the village to provide important information concerning the kinds of occupations and trades that are viable and can provide a living or supplementary wage for some villagers. Frequently, learners join a skill group with hopes of utilizing newly acquired knowledge to earn a living or to supplement their incomes, not knowing that they are likely to be disappointed because the market is saturated. This means PENMAS must provide programs in addition to those which contain the national curricula. Peniliks have to be trained in not only conducting needs assessments, but also in designing programs to meet the needs. This means giving the penilik more authority to implement programs.

PENMAS should also consider concentrating more of the project resources at the village level. It is understandable that PENMAS has, thus far, allocated resources primarily to the development of the administrative infrastructure above the village level. However, the village is ultimately the crucial target, and the most elaborate infrastructure is irrelevant if it does not result in significant impact in the villages. Priority should be given to the articulation of a strategy for investment of resources at the village level.

The Learning Fund

Presently, PENMAS is in the process of modifying the learning fund concept and operation. Consequently, the evaluators hope PENMAS will consider the following suggestions. First, field-workers (peniliks, tutors, and facilitators) and kabupaten level staff require more training than is the current PENMAS policy regarding procedures in applying for learning funds and the criteria for selecting groups to receive learning funds.

Generally, there is a need to greatly streamline and speed up the funding approval for the routine learning groups and for learning fund distribution. The observers wrote that the long delays in approving learning projects tended to result in loss of participant interest.

A second problem of the Learning Fund Program is that it has been largely concerned with the distribution and accounting of funds, and less concerned with the learning aspect of the groups.

Many of these problems can be accounted for by the fact that the program is new for PENMAS. PENMAS is on target, according to the Project's appraisal document, in distributing learning funds. PENMAS has also been conducting intensive research on the program in the form of case studies and analysis of problems. This research has already resulted in changes in the implementation of the program, and PENMAS is now focusing on the learning component of the program.

This program has great potential to solve many of the Problems involving access and need. Because the Learning Fund Program provides funds, the poorest of the poor should be able to participate; whereas, even the very low cost of Basic Education programs prevent many poor persons from joining or completing the course. A large percentage of PENMAS learners join the programs in order to improve income, which is an immediate outcome of the Learning Fund Program. These factors should provide the motivation necessary to learn basic literacy, or at least functional literacy skills.

The potential of the program is great, but its present weaknesses must be overcome if it is to be successful. The observers report that many people in the villages view it as a type of lending program; the training component is not usually visible. The penilik must insure that a concrete learning program is designed for each group and competent resource persons and facilitators are found.

The Penilik

PENMAS learning activities ultimately depend for their success upon the penilik. Yet, the penilik possesses no real power, is overworked, and is provided with little system support, monitoring and feedback.

Project success at and below the kecamatan level tends to depend heavily upon the idiosyncratic personality traits of the individual penilik. PENMAS must seek to develop a more broadly generalizable system of support for the penilik, so that success is not heavily dependent upon imponderable and unpredictable factors. There is a need for a higher level of the PENMAS hierarchy to attempt to co-opt and persuade some government authority higher than the penilik (for instance, the bupati, the head of the district) to support the penilik and PENMAS goals. If the bupati is not initially persuaded, then even the most dynamic peniliks are unlikely to be able to persuade the heads of the sub-districts and villages to support their local activities.

The peniliks must be permitted to concentrate upon their primary tasks. The evaluation reveals that a potentially serious problem in PENMAS is the fact that the peniliks were frequently drawn away from their tasks by many other demands unrelated or peripheral to their primary function. The penilik's continued attention was of critical importance to the operation and survival of learning groups.

Problems result from forcing the penilik into a quota-minded mold and from the delays in the funds necessary to support learning groups. One recommendation is to provide peniliks with an approved annual budget and then give them much greater decision making power to allocate these funds according to the specific needs of their kecamatan. This approach, however, depends upon much better training of the peniliks with respect to the assessment of village needs. All the evidence of the evaluation points to the fact that the peniliks currently have little skill in conducting an assessment of village needs. Correcting this shortcoming in training should be among the most immediate priorities for PENMAS. There is evidence that many peniliks alter structured programs to meet local needs. So in fact, they do exercise some discretion already. This discretionary power should be institutionalized, encouraged and extended to management of budgets at the kecamatan level.

Given the critical role of the peniliks and the fact that they are

overworked, the evaluators recommend assistants for the peniliks. Furthermore, many of the kecamatans have many villages spread over a great distance, which makes it difficult for one penilik to have much impact.

The evaluation team also recommends modifying present penilik recruitment practices in order to attract younger, more independent, more field-oriented people. Recruitment should no longer be weighted so heavily in favor of older, experienced, but largely desk-bound school headmasters, teachers, and civil servants. Regulations must be altered to ensure that younger people, with both field experience and academic training, can become peniliks.

Furthermore, penilik training activities should focus more on field experience rather than on administrative procedures. Attitudes and behaviors which are now appropriate to waiting for orders from above must be changed and instead stress independence of action and self initiative. The field-based training of peniliks that has been implemented seems to meet this need.

Throughout this evaluation, the village observers commented on the social distance which exists between the PENMAS fieldworkers and the villagers, and between members of learning groups who belong to different social statuses. The experience of other community development programs is that this problem of social distance can result in serious learning difficulties and can eventually cause drop-outs. Therefore, a recommendation for penilik training is to help teach them how to deal with the problem of social distance.

At this point there is no precise idea of what specific qualities and skills are required of a good penilik; however, "good" peniliks can be recognized by their success in actual program operation. Therefore, we suggest that successful peniliks and successful demonstration projects should be identified and used as sites for the field training of other fieldworkers. Working with a highly successful penilik or within a successful demonstration project may be the most effective training for a new PENMAS fieldworker. Moreover, this identification process may ultimately help PENMAS understand what objective and trainable qualities produce a good penilik.

The Learning Groups

A strong recommendation is for PENMAS to concentrate more upon the retention of learners and the maintenance of learning groups than on fulfilling recruitment quotas. A great deal of evidence

points to the fact that when the penilik concentrated primarily upon quantitative targets, this tended to produce weakly instructed groups that suffered from premature collapse or heavy dropout rates.

Consistent with this recommendation, the evaluation team felt that PENMAS should focus more upon developing strategy and methods for recruiting and retaining members of the poorer groups. PENMAS fieldworkers need to be trained in how to do this more effectively. Peniliks who are successful in the recruitment and retention of these poorer participants should be studied for possible utilization of their techniques in other areas.

The evaluation team agreed that PENMAS should concentrate more on the vocational skill courses. Similarly, they should seek a solution to the problem of attracting and rewarding good skilled tutors. These skills courses seemed clearly in demand.

Both the quantitative and qualitative data point to the fact that these Vocational Skills courses are attracting youths who are school leavers and who tended to come from landless families. In short, they represent potentially one of the most politically explosive groups in Indonesia. If PENMAS can help defuse this segment of the population by providing productive skills, it will be an important contribution to national stability.

The need is for courses which offer the learners more immediate payoff than they get from the Basic Education courses; courses more relevant to learners' short-term needs and more marketable in their areas. Perhaps a closer relationship between the Vocational Skills, Learning Fund programs and the literacy courses would be desirable. There is evidence from other nonformal education experiments in the third world that it may be more effective to move from the learning of vocational skills to literacy rather than the reverse.

There is a great deal of research evidence that mixing learners from markedly different status groups, such as mixing school dropouts who enter Basic Education groups in order to obtain primary school equivalence certificates with illiterates, is likely to negatively affect the learning of the low-status members and, therefore, be detrimental to their retention in the group. PENMAS should consider forming groups that are more nearly homogeneous in socioeconomic status. The observers repeatedly reported that the poorer participants frequently dropped out of learning groups because they "felt inferior" to the higher status members.

Furthermore, the peniliks should not be bound to strictly follow the time set in the national curriculum of PENMAS programs in conducting learning groups. Many peniliks established and ran several learning groups at exactly the same time regardless of the different backgrounds of the learners. This created problems in distributing limited learning resources, scheduling supervision, and in setting participants' expectations of learning outcomes. Learners with higher educational backgrounds or who are younger, required different amounts of time to achieve certain learning outcomes than older learners who had less education. This problem seemed to result partly from the lack of the penilik's understanding in interpreting the curriculum and partly from the need of the penilik to provide an administrative report concerning the establishment of the learning groups.

According to their own reports, most of the peniliks and many tutors and facilitators in the sample villages conducted evaluations with learners who completed the courses. However, according to most observers, there was little evidence that they systematically attempted to provide follow-up treatment for those learners. It is the evaluation team's opinion that this should be one of the most important tasks of the PENMAS penilik. Graduates of learning groups should be provided with all the assistance possible to find productive applications for their newly acquired knowledge and skills.

The Tutors

The present volunteer system for recruiting tutors gives the penilik very little control over the kinds of learning groups that are formed. The choice is determined by the availability of tutors who work for little or no pay. This may or may not coincide with the real needs of the community. There is no simple solution to this problem since an increase in funding in the foreseeable future is unlikely. Nevertheless, the evaluators urge PENMAS to place high priority on the need to seek alternative means for attracting and retaining good tutors. The observers claimed that even among those tutors who were recruited the first time by reason of prestige or social obligation, nearly half were reluctant to work with no pay a second time. The evaluation team felt that if PENMAS is planning to expand it must find a dependable method of recruiting the necessary village-level personnel.

With respect to tutors, the evaluation team recommends a more systematic means of monitoring and evaluating the performance of

tutors and facilitators. This should be in the form of short, simple to apply instruments that can be both administered and analyzed by the penilik to provide necessary feedback and assistance. In order for the peniliks to conduct their monitoring and supervision tasks more readily, purchasing of transport, such as motorcycles, is recommended.

Tutors should be trained in instructional techniques that are better suited to the target population, not simply applying old traditional rote memory and lecture methods. Many appropriate techniques have already been developed for use among such populations by nonformal education programs, such as that at the University of Massachusetts. Furthermore, tutors should also be trained to use modern evaluation methods for monitoring the learning outcomes of the participants and for providing them with corrective feedback. Training of facilitators and tutors should be systematically conducted. More and better training facilities and qualified staff to conduct the training are required. The most systematic training of facilitators and tutors is done at existing SKBs However, there are too few SKBs to meet the needs of the villages. Future training of tutors and facilitators should involve close coordination between the peniliks, district level staff and SKBs.

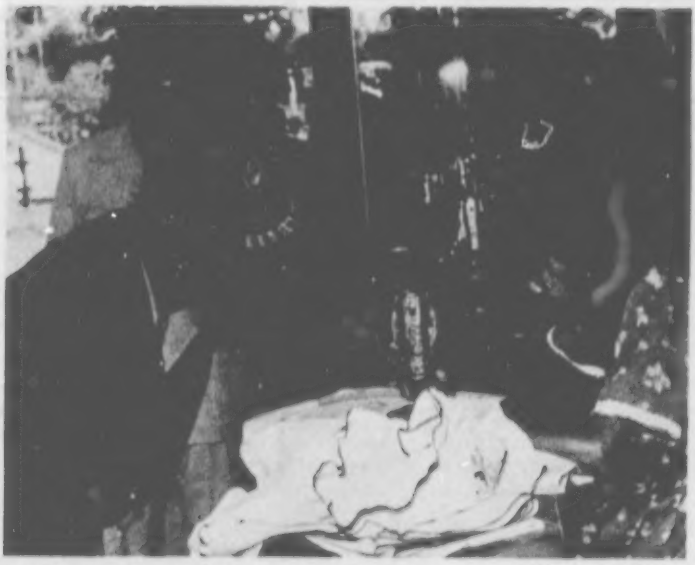
The evaluation revealed that many learners felt that the tutors used too much Bahasa Indonesia in conducting the learning groups, an important reason for dropping out. If the skill groups are to attract increasing numbers of the poorest groups, PENMAS should encourage the tutors of these courses to conduct them in the regional language when the participants do not have adequate mastery of Bahasa Indonesia. Furthermore, the evaluation team suggests that PENMAS consider modifying their strategy in the Basic Education courses by using the regional language as a springboard to literacy in Bahasa Indonesia. Experimental and practical evidence has accumulated which strongly suggest this route to literacy is a more effective approach than teaching literacy in the second or national language from the outset.

To obtain and keep good tutors, who are usually primary school teachers and receive little or no honorarium in Basic Education learning groups, a system could be formulated by the Ministry of Education and Culture to give them compensation through promotion as teachers by using a credit system which is being developed in the Ministry.

CONCLUDING REMARKS—IMPACT AT THE VILLAGE LEVEL

In this chapter two main sections, evaluation design and methodology at the village level and policy recommendations, were extracted from the complete, but lengthy summative evaluation report. Although it is not appropriate in this document to discuss all the results of the PENMAS NFE Project, a few highlights regarding the impact of PENMAS programs on the learners' quality of life deserves mention. The findings presented below were extracted from the section in the final evaluation report, "Impact on the Village As a Whole," but pertain only to individual learners.

The evaluation team did not expect that the data would indicate an impact at the village, for the PENMAS NFE Project had only been in effect for about two and one-half years at the time the evaluation was concluded. However, there was considerable impact on the individual learners who joined the programs. For example, 16% of all learners from the learning groups which were studied intensively by the observers reported that they were able to increase their incomes as a result of PENMAS programs. The data also indicated there was an impact on the quality of learners' lives in terms of their use of local services, particularly in the areas of health. Additional changes were noted in attitude toward learning literacy skills; 70% of the learners said that PENMAS programs motivated them to learn more reading and writing skills. Furthermore, the data analysis revealed that learners, as a result of participation in PENMAS programs, also improved their social relationships, increased their knowledge of nutrition and improved their management of household finances. There was also an impact on PENMAS personnel and on the village as a whole. As PENMAS continues its development, the impact of its programs can be expected to increase.



Director General of PENMAS visiting a Family Life Education class

Assessing learning group's needs through games

MANAGING TECHNICAL ASSISTANCE

GUIDING PRINCIPLES

Managing Technical Assistance

1. Technical assistance is most effective when the institutions involved form a collaborative partnership, recognizing mutual goals and benefits, and sharing resources. Specific management mechanisms must be established at the beginning to support such collaboration.
2. The role of a technical assistance specialist is that of a professional colleague working for and with national staff members. Using specialists with experience working as volunteers increases the chances of having staff with the attitudes and flexibility needed to function effectively in a developing institution.
3. An effective technical assistance team needs a balance between technical competence and cultural sensitivity. The ability to communicate effectively and to build constructive working relationships with colleagues is just as essential as technical skills are.
4. Responsive and flexible management is a critical component of technical assistance projects. Administrative procedures must be modified to provide effective communications, financial management, and personnel support under the special conditions of long-distance operations.
5. Building a bi-national staff at both ends of the collaboration is an effective way of managing international assistance in nonformal education. Staff members of both nationalities must be listened to with respect by decision makers in the collaborating institutions.

Institutional Collaboration

Early in contract negotiations, PENMAS and Center for International Education staff discussed the type of organizational relationship which they desired. Both groups sought to build a mechanism of collaboration in meeting project goals, joint problem-solving, and the sharing of both resources and benefits in a combined effort to develop the Nonformal Education Project. While PENMAS and the Center explored methods to make such a relationship a practical reality, both recognized that they were part of larger institutions and must operate within that framework. This consciousness of an expanded institutional framework became a factor in the checks and balances of initial negotiations and, ultimately, a major long-term project strength.

PENMAS, as part of the Ministry of Education and Culture and under the Directorate-General of Nonformal Education, Youth and Sports, was subject to all usual Government of Indonesia procedures and guidelines in planning, budgeting, staffing, and evaluation. The Center for International Education (CIE), as part of the School of Education of the University of Massachusetts was obliged to abide by University and state regulations in contracting, financial accounting and academic programs. Both PENMAS and CIE recognized the challenge of drawing upon the resources of their institutions to respond creatively to the unique needs of a non-traditional, national nonformal education project. Key personnel from each institution became involved in meeting this challenge and made a mutual commitment to provide the institutional support critical for project success.

The result was a technical assistance effort that worked toward a true institutional partnership in which specialist services and training were fully integrated with project goals and activities. Together, PENMAS and CIE defined ways to put their partnership into practice in day to day operations and in long-term planning and review. These collaborative mechanisms included innovative management strategies, resource sharing, joint definition of specialist roles and administration procedures that could respond quickly to changing project needs.

Collaborative Management Strategies

In a long-term relationship such as a four-year technical assistance contract, neither institution can foresee all needs that might

emerge, problems that might arise, or new directions and initiatives that might be undertaken. Therefore, semi-annual contract reviews were established as a means for PENMAS and CIE to discuss the activities of the past, clarify current issues and plan together for future cooperation. These meetings every six months alternated between Indonesia and the United States, with one or two senior staff traveling from their home base to spend two weeks at the other institution. Such regular, face-to-face meetings proved an effective means of strengthening the institutional understanding and providing well-focused support. In addition, University staff visiting Indonesia had the opportunity to meet with their specialists in the field, while PENMAS staff visiting the United States could have direct input to project participant training activities at the University.

At the conclusion of each review and planning meeting, a Memorandum of Agreement was signed by the representatives of both institutions which highlighted the plans for the next six months. Thus, both activities and budget allocations could be revised to meet the evolving needs of the project. Each Memorandum of Agreement also summarized the tasks accomplished during the previous six months as discussed and clarified during the review meetings.

Sharing of Resources

In the spirit of collaboration, both institutions sought opportunities outside of already defined contract terms to assist each other by sharing information and personnel resources. All documents related to the project were made available to both parties, many of them in both Bahasa Indonesia and English, using translators from both institutions. Materials developed by PENMAS became a rich source of field-based information for the University. The Center for International Education, using its own Nonformal Education Resource Center as a model, researched, reviewed, ordered, and shipped materials of interest to national level PENMAS officials as well as to stock IKIP and Balai PENMAS libraries.

In the later stages of the project, PENMAS and the Center jointly authored and published several documents of potential interest to international developers and educators. These included a series of "Technical Notes," on materials and techniques developed in Indonesia. The book in which this chapter appears is a major example of how both institutions contributed resources and combined ideas in a final product.

Role of Technical Assistance Specialists

Throughout the contract, technical assistance specialists were viewed as working for and with PENMAS staff, not as outside "experts" with special status or authority. Emphasis was placed on qualities of sensitivity, respect for other cultures, and flexibility in approach and outlook. Dr. W. P. Napitupulu, based on his own experience with BUTSI and other volunteer organizations, recommended that past work as a Peace Corps Volunteer might be one of the indicators of the type of persons needed as specialists. Ultimately, all but two of the ten long-term specialists had had some kind of volunteer experience and there was general agreement that it had increased their adjustment to and effectiveness in their roles in Indonesia.

Materials development staff preparing a fotonovela

PENMAS staff were directly involved in the selection of all specialists. Job descriptions included in the contract were discussed and amplified by representatives of both institutions as a basis for recruitment. Candidates for the five positions to be filled first were interviewed by PENMAS staff while visiting the University during the contract start-up phase. For all positions, CIE ranked and

recommended several candidates; PENMAS made the final selection decision.

All specialists who did not already speak Bahasa Indonesia took intensive lessons in that language. As a result, specialists quickly were able to use Bahasa Indonesia in their daily work. Many gained a sufficient level of fluency to use the language in written reports and in translating materials into English when needed. The willingness and ability to learn and use Bahasa Indonesia was an important factor in determining specialist effectiveness as a part of PENMAS.

While specialists were members of the University technical assistance team, supporting and complementing each other in their work, each had individual assignments and responsibilities. Most specialists were well-qualified in their professional areas, such as materials development, training and evaluation. However, in a few cases specialists who met the general selection criteria and had volunteer experience, did not have extensive experience in their fields of specialization and had to learn additional skills on the job. Even these specialists, though, had experience in related fields and were able to enrich the program as a whole. In general, the balance between cultural sensitivity on one hand and professional competence on the other was maintained. This type of mix in foreign technical assistance is highly recommended for such large-scale nonformal education projects.

Most specialists were first placed in the central office of PENMAS in Jakarta, but in the second year of the project, PENMAS and CIE agreed that it would be more effective if some of those specialists were placed at the provincial centers. This meant they could offer more concentrated assistance to one Balai PENMAS, while still visiting the other provincial PENMAS centers for short periods. This reassignment demonstrated the spirit of personal and professional flexibility in meeting project needs.

An important aspect of the specialist role was to become a link between program activities in Indonesia and participant training in the United States. In several instances, specialists worked with participant training programs for PENMAS and IKIP staff before leaving to begin their assignments in Indonesia. Once in the field, specialists maintained an active dialogue with CIE by letter and telex. Thus, they contributed to the gathering of needs assessment information for U.S. training and to the follow-up evaluation of training. In addition,

specialists recommended materials of potential use to PENMAS and offered continuing analysis and advice on how the technical assistance contract might best serve the project. This linkage function was possible because the role of the specialists was not narrowly defined, but was encouraged by PENMAS and the CIE to evolve and expand throughout their field assignments.

Administrative Procedures

While both PENMAS and the Center for International Education necessarily operated within the administrative framework of their larger institutions, certain internal procedures were developed to cope with the special demands of a long-term, long-distance contract. Some of these had been used by one or the other organization in past contracting activities; other were unique to this contract. Several such administrative procedures in budgeting and finances, communications, and personnel support were particularly effective and are worth sharing.

Budgeting and Finances

The semi-annual contract reviews were an opportunity to review both tasks and budgets. Institutional representatives at the reviews had the authority to make budget reallocations. This process was aided by the fact that basic services in the contract such as specialists and participant training were billed at agreed upon unit prices. Thus, for example, if the situation changed and there was no longer a need for a short-term consultant included in the original plans, the unit price for that position could be shifted to some other service where additional resources were needed. The extra resources might be used to extend the contract of a needed specialist for an additional time period.

Another aspect of responsive financial administration was the use of an imprest fund in Indonesia. An account was established at an Indonesian bank and the University specialist who was designated as team coordinator was given authority over the account. The University deposited an initial advance in the account and thereafter replenished the account as paid receipts were submitted to the University. This account was then used to pay virtually all costs for project activities in Indonesia, including housing and in-country travel for specialists, local staff salaries, travel for participants going to the United States for training. Monthly accounts of the imprest fund were sent to the University for inclusion in the overall contract

accounting. The use of the imprest fund eliminated many potential delays in handling in-country expenses.

PENMAS and UMass staff at biannual meeting

Communications

The distance between Indonesia and the United States and the resultant time required for normal mail delivery called for several other strategies to provide the timely communications needed to run a project of this size. Compounding the problem was the twelve-hour time difference between Indonesia and Massachusetts, which meant that there was no overlap in office hours at all.

An early decision was made to rely heavily on telex communications. Telex has the significant advantage of being able to receive messages without the presence of a human operator. Thus, messages sent during working hours from Jakarta were waiting on the telex machine when CIE staff came to work the next morning. The telex was particularly valuable for relaying requests or summary information needed for decisions.

The telephone was used when there was a need for discussion of an issue and joint decision making. Calls were frequently arranged by telex to notify the other party of the topic and the time of the call. Both parties could then be prepared with relevant information, and decisions could be made during the discussion. Summaries of calls were often made available so that all relevant staff members could be fully informed of the situation in the field.

Regular use of the mails was also made. The team coordinator in the field sent weekly correspondence, supplemented by monthly reports from each of the specialists in the field. CIE sent a weekly

packet of correspondence and materials every Friday afternoon. Reports and correspondence all received sequence numbers so that both parties would know whether they were missing mail.

This combination of strategies was crucial to the successful management of the project. International projects frequently suffer from long delays resulting from mis-communication, mis-understanding, and loss of correspondence. Delays cause frustration and diminish the trust of the parties involved. Tension and conflict between field personnel and home-office personnel were largely avoided through this combination of methods and prevented most small problems from mushrooming into major difficulties. Effective communication was given a high priority, and this emphasis contributed to successful project operations.

Staffing at the Center for International Education

From the beginning, CIE was committed to the philosophy of bi-national staffing as a central component of the collaborative model. Initial plans to have a senior level PENMAS official in residence at the University during the project were not feasible. However, soon after the beginning of the project, CIE was able to hire an Indonesian as a full-time trainer and manager on the project. Subsequently, several other Indonesians were hired on a part-time basis as well, to serve as translators and to provide assistance when large groups of trainees were on campus. Program staff at CIE also included nationals from other countries who were part of the international membership of the Center.

The Indonesian staff members, in addition to their regular responsibilites, also served as guides for the Indonesian participants through the inevitable confusion of entering another culture, and functioned as an informal communication channel between them and University staff. Much confusion was avoided through the sensitive and effective role played by these staff members. Their contribution to the overall program was critical to its success.

FUTURE DIRECTIONS FOR PENMAS

The preceding chapters have described the major components of the PENMAS Nonformal Education Project, attempting to outline problems and weaknesses as well as successes and strengths. Results of both the summative evaluation conducted by the BP3K Evaluation Team (see Chapter IX) and the Project Review conducted by a World Bank mission* indicate that the Project has achieved most of its initial objectives. Of the problems that remain, many can be attributed to the overwhelming size and scope of the Project and, in that context, are relatively minor. PENMAS is addressing these problems continuously, experimenting with new administrative procedures, training designs and materials production at all levels.

Perhaps more significant in the future of PENMAS are two themes which underly the goals and objectives of the Project. The first is the need to reach and serve the "poorest of the poor" of Indonesia's rural and urban populations. The second is to incorporate in action the learner-centered philosophy of nonformal education, encouraging local level participation, decision-making and control over project activities. These themes are obviously related and PENMAS has built the infrastructure in the project provinces to support and forward them. In strengthening the existing project and in considering plans for expanding the project, PENMAS will require a consistent vision of how these themes interrelate with project activities, as well as a willingness and ability to develop concrete means of integrating these themes at every level.

Reaching and Serving the Poor

To what degree do PENMAS programs meet the needs of Indonesia's most educationally and economically disadvantaged? Project evaluations attempt to address this question, but data is as

*Observations by the World Bank Project Review team were shared with PENMAS staff in March, 1982.

yet inconclusive, indicating considerable unevenness of success in this regard. A more appropriate question here might be, "How can PENMAS improve its total program to more effectively serve this target population?" Evaluation recommendations range across project levels and components, and project size and complexity may obscure the implications that change in one area of activity may have for other areas. It may be useful, therefore, to re-summarize some of these recommendations and their progressive implications throughout the various levels of PENMAS operations. This summary is far from all-inclusive, but serves as an example of how local level change must be reflected throughout the system.

Local level recommendations call for more effective needs assessment among target populations to determine which existing PENMAS programs or new programs are most appropriate for potential learning groups. If peniliks are to have this responsibility in the kecamatan, then several implications for other levels follow:

> At the kabupaten level PENMAS and SKB staff must train and supervise peniliks in needs assessment techniques, choosing those most appropriate for the region and situation. Monitoring of penilik activities and penilik reporting requirements should be revised to reflect this emphasis.
>
> At the provincial level, kabupaten PENMAS and SKB staff must be trained as penilik trainers in needs assessment. As part of this training of kabupaten level staff, the Balai PENMAS should make available alternative needs assessment methodologies, drawing upon the resources of the national PENMAS organization. The Balai PENMAS should support training and supervision at the kabupaten level through on-site observation and advice, materials development based on kabupaten needs, and formative evaluation strategies.
>
> At the national level, the PIU should coordinate the sharing of information, training methods, needs assessment instruments and materials between the provinces. Further, national level requirements for penilik quotas of learners and learning groups should be revised in recognition of the increased time and effort required by thorough needs assessment. Qualitative, rather than quantitative, evaluation measures should be encouraged at all levels.

Thus a change in penilik priorities at the local level implies corresponding changes in the responsibilities of district, provincial and national level staff. The organizational infrastructure created under this project has been designed to deal positively with such constructive change.

A second set of recommendations deals with the needs for larger numbers of skilled tutors and facilitators. The large populations and frequent transportation difficulties of most kecamatans preclude the majority of peniliks from all but minimal direct contact with learning groups. Peniliks necessarily rely upon local volunteers as tutors and facilitators for work with learning groups. Recommendations in this category include better recruitment and selection of tutors and facilitators, more training and material support for their work, and the development of various incentives or rewards so that tutors and facilitators will be more than one-time-only volunteers. If effective tutors and facilitators are critical in reaching and serving the poor, then changes are required throughout the system:

> At the kecamatan level, the penilik must recruit, select and support facilitators and tutors who can meet the identified needs of learning groups. The penilik should act as a liaison between the tutors and facilitators and the PENMAS organization, bringing their needs to the attention of district staff and offering rewards for service in the form of honorariums or prestige incentives.
>
> At the kabupaten level, PENMAS and SKB staff must train and support peniliks in their role as managers of tutors and facilitators. In addition, the SKB should train the tutors and facilitators in skills they may need as adult educators. Finally, kabupaten level staff should develop appropriate learning materials to meet the needs of learning groups in their area for use by tutors and facilitators.
>
> At the provincial level, Balai PENMAS staff should train PENMAS and SKB staff in their role as trainers of peniliks, tutors and facilitators. This would include a range of responsibilities in training, monitoring and supervision, materials development and evaluation. In addition, the Balai PENMAS should prepare prototype learning materials and evaluation instruments for use and adaptation at the kabupaten level and in response to kabupaten needs.

> At the national level, the PIU should ensure that training and support of tutors and facilitators receive a high priority within the PENMAS organization. Since many kabupatens do not have an SKB for tutor and facilitator training, the PIU should encourage and support the development of alternative methods and models for such training, sharing this information with all provincial PENMAS staff.

It should be clear from these examples that if PENMAS is to be more consistently effective at the local level a close examination of the role of local level staff is required—peniliks, tutors and facilitators must be enabled to provide the services needed. Other levels of the organization must modify themselves to offer the training and support for this local staff. Inevitably, in establishing such a large-scale program, most direction in the past has come from national and provincial centers. In a continuing effort to reach and serve the poor, it is apparent that this direction must be, if not reversed, then significantly changed to balance initiatives from national and provincial levels with a systematic response to needs expressed at district and sub-district levels. The ability of PENMAS to serve the "poorest of the poor" is linked directly to the second underlying theme of decentralized, local-level decision making.

Decentralized Decision-Making

Several factors have mitigated against the adoption by PENMAS of a decentralized decision-making model in spite of its principles of participation and local control. For one, PENMAS is part of a larger government bureaucracy which because of its size inevitably created its own internal bureaucracy. Like all bureaucracies, it tended to give more attention to directives from upper levels and to resist change suggested by localized, less powerful organizational units. Second, the majority of project staff were, if not new to PENMAS, new to their particular roles and responsibilities and had to gain confidence in them before determining what aspects of decision-making they might appropriately delegate to others. Finally, project goals called for much to be accomplished in very little time. Participation and local level decision making is a long-term strategy, requiring time and patience for positive results. In the first four years of the project, more central, direct control seemed necessary, both for efficiency and to be sure that overall goals and objectives were maintained.

This initial period of institution building is near completion and PENMAS already is moving toward the delegation of responsibility and the decentralization of authority in most project areas. New models for training peniliks at the kabupaten level rather than at the Balai PENMAS have been developed. There is increased emphasis on local production of supplementary learning materials and peniliks are being encouraged to modify programs, curriculum and time schedules to meet local needs. Intensive efforts have already been made to decentralize the administration of project funds; this is a sensitive area, since control over finances is a clear indicator of power and status in any organization. Real or perceived requirements for provincial and national staff to authorize all disbursements of funds at the kabupaten and kecamatan levels have caused extensive delays in implementing local programs, resulting in frustration for local staff and a loss of interest by potential learners. Efforts to deal with this problem are underway, but it is not a matter of a simple change in regulations; attitudes of staff at all levels must be modified, legitimate risks accepted, and procedures streamlined to make funds more directly and more quickly available at the local level.

Most challenging, PENMAS must seek ways to assist learners to realize their own decision-making potential in determining what types of programs will be most beneficial. PENMAS now has the capacity to cope with multiple, diverse demands for programs, training and learning materials, but the demands must come from the learners and their tutors and facilitators. This can only happen when learners recognize PENMAS as a potential resource in their own development and are able to define and clarify their needs. Decision-making at this level has important implications for the role of local staff and their ability for positive interaction and dialogue with learners. Institutionally, PENMAS must not only train local staff for this role but also create mechanisms for the systematic gathering of accurate information on local needs and resources which can be used as a basis for new programs and materials.

At the writing of this book, the final year of the five-year project is about to begin. During this year and during the subsequent five years in which a second phase of development is planned, PENMAS will continue to strengthen its program in the project provinces. Much of this effort will focus on improving preparation and support of local staff. Provincial staff will assume more leadership in developing new designs, programs and materials, while central staff will

become less directive and more involved in consolidating and sharing what has been learned in provincial operations and program areas. New ways of making the resources and expertise of each Balai PENMAS available to others in PENMAS will be explored and coordinated, so that these provincial centers may act as consultants to each other.

While work in the original project provinces continues, plans are being made to extend the development of PENMAS to the twenty provinces not included in the first five-year effort. This is an ambitious task because, while these provinces are less populated than the original seven, they are geographically more scattered and less accessible, often lacking even modest transportation and communication facilities. However, the need for PENMAS programs there is critical, and, as a national development agency, PENMAS cannot ignore that need. In general, PENMAS plans to use the institutional model of the present project in the additional provinces, with modifications in resource allocation according to each province's unique conditions. Provinces new to the program will be teamed with one of the original seven which will act as a development partner, assisting in training, programming, materials development, evaluation and administration as these operations are established. It is hoped that by 1988 all of Indonesia's twenty-seven provinces will be included in the PENMAS program and will have the necessary staff and resources for further development.

It is a credit to all those involved that the success of the project merits this expansion of PENMAS throughout the country. PENMAS has proven its ability to fulfill its goals of education and development; what remains is to bring this experience and commitment to all the peoples of Indonesia.

APPENDIX
INDONESIAN TRAINING PARTICIPANTS AND UMASS PROJECT STAFF

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GLOSSARY

BPKB	*Balai Pengembangan Kegiatan Belajar* A national resource center for nonformal education, youth guidance, and sports with the main functions of training and learning materials development.
BPM	*Balai PENMAS* PENMAS provincial center in the six project provinces with extended functions to include program management and technical backstopping, whose structure is made up of five units: —program development —staff development and training —materials development —technical secretariat —monitoring and evaluation The centers contain advanced training and materials development facilities including darkrooms, recording studios, and printing presses.
BP3K	*Badan Penalitian dan Pengembangan Pendidikan dan Kebudayaan* Research and Development Office of the Ministry of Education and Culture responsible for research and evaluation activities in the fields of education (formal and nonformal) and culture.
Bupati	An administrative officer at the district (sub-province) level with the coordinating function for all government programs within his area of administration.
BUTSI	*Badan Urusan Tenaga Sukarala Indonesia* The Indonesian Volunteer Service Corps made up of college graduates who volunteer to do development work in the villages for three years.
Camat	An administrative officer at the sub-district level (kecamatan) with the coordinating function in the implementation of all government development programs in that area.
D1 Diploma Course	A one-year pre-service training course at college level to prepare prospective PENMAS fieldworkers.

Dharma Wanita	A nationwide women's organization engaged in education and social activities and made up of women civil servants and the wives of civil servants.
Gotong Royong	A traditional and indigenous custom of mutual help and cooperation in village life.
IKIP	*Institute Keguruan dan Ilmu Pendidikan* Institute for Teacher Training and Science of Education for training secondary school teachers, college lecturers and other school administrators.
Kasi PENMAS	*Kepala Seksi PENMAS* PENMAS officer at the district level with responsibility for the supervision and technical backstopping of sub-district fieldworkers (penilik).
Kejar Usaha	The Learning Fund Group is one of the PENMAS programs designed to help groups of out-of-school youths or adults set up small business enterprises.
Kepala Bidang PENMAS	The head of a PENMAS provincial office in the non-project provinces. In the six project provinces, he or she would also be called *Kepala BPM* (see *BPM*).
Kabupaten	A district: an administrative area below a province (see *Bupati*).
Kecamatan	An administrative area below a district (see *Camat*).
Lurah	A village head.
Masorda	*PENMAS, Olah Raga Pemuda* Community Education, Sports, and Youth Section of the district level office of education.
Micropu	*Micro Mobile Printing Unit* A mobile printing unit operating at the sub-district level and helping peniliks with the production of printed learning materials. An experimental project.
Paket A	Series of 100 booklets designed to impart: (a) literacy skills, (b) the national language, and (c) basic information and life-coping skills to illiterates or semi-literates in order to improve their standard of living and quality of life.

Pamong	A volunteer in the village helping the penilik to organize and sustain learning programs in the village.
Panduan Latihan	A training guide or manual providing information for trainers on all aspects of implementing a training program.
PENMAS	A divisional unit of the Ministry of Education and Culture, under the Directorate-General for NFE, Youth, and Sports responsible for providing and overseeing nonformal education programs in the country.
PIU	Project Implementation Unit of Directorate of Community Education (PENMAS) responsible for overall project planning, coordination, implementation and evaluation.
PKK	*Pendidikan Kesejahteraan Keluarga* Family Life Education Course: one of the PENMAS programs in household management and domestic skills, especially for women.
PK-10	*Sepuluh Patokan* A data-gathering instrument requiring detailed information about all aspects or components of PENMAS programs.
SATGAS	*Satuan Tugas* A task force set up on an ad hoc basis to perform specific and temporary assignments.
SEKTEK	*Sekretariat Teknis* Technical staff section of Provincial PENMAS responsible for staff development and training.
SKB	*Sanggar Kegiatan Belajar* A resource center for nonformal education, youth and sports at the district level, providing training and materials development services for programs operating at the sub-district level.
SPEM	*Supervisi, Pelaporan, Evaluasi & Monitoring* A monitoring and evaluation unit of the PENMAS provincial center (BPM). The acronym stands for its functions: supervision, reporting, evaluation and monitoring.

Ten Basic Characteristics	Key indicators by which PENMAS programs are assessed for their effectiveness.
TKPK	*Teknologi Pendidikan dan Kommunikasi* A communication technology unit of the Ministry of Education and Culture, responsible for development of multi-media systems of delivery in education and culture.
Tutor	A volunteer teacher who facilitates learning processes in the learning groups.

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